



DEH-55/UC



ORDER NO.

HIGH-POWER COMPACT DISC PLAYER WITH FM/AM TUNER

HIGH-POWER COMPACT DISC PLAYER WITH FM/MW/LW TUNER

UC



Note:

- This service manual is designed to be used together with Model DEH-66 and DEH-66SDK Service Manual (CRT1166). Refer to it for disassembly and adjustment, etc. which are not shown in this
- See the separate manual CX-173 (CRT1161) for the CD mechanism description.
- See the service manual CDX-3 (CRT1177) for CD mechanism circuit description.

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1. SPECIFICATIONS

• DEH-55/UC

General
Power source
Grounding system Negative type
Max. current consumption
Dimensions (chassis) 178 (W) × 50 (H) × 150 (D) mm
$[7 \text{ (W)} \times 2 \text{ (H)} \times 5-7/8 \text{ (D) in.}]$
(nose)
[6–3/4 (W) × 1–3/4 (H) × 5/8 (D) in.]
Weight
Continuous power output is 10 W per channel min. into 4 Ω , both
channels driven 50 to 15,000 Hz with no more than 5 % THD.
Max. power output
Load impedance 4 Ω (4–8 Ω allowable)
Max. output level/
output impedance (pre out)500 mV/1 kΩ
Tone controls (bass) ± 10 dB (100 Hz)
(treble) ± 10 dB (10 kHz)
Loudness contour + 10 dB (100 Hz), + 7 dB (10 kHz)
(volume: -30 dB)
CD Player
System Compact disc audio system
Usable discs
Signal format Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Frequency characteristics 5–20,000 Hz (± 1 dB)
Signal-to-noise ratio 85 dB (1 kHz) (IHF-A network)
Dynamic range
Wow and flutter Below measurement range
Distortion factor
Number of channels
redifficer of channels

LAS COLLES	FM	tuner
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Frequency range	87.9–107.9 MHz
Usable sensitivity	12 dBf (1.1 μV/75 Ω, mono)
50 dB quieting sensitivity	17 dBf (1.9 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IHF-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30-15,000 Hz (± 3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)
Selectivity	

AM tuner

Frequency range	530 - 1,620 kHz
Usable sensitivity	18 µV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (±10 kHz)

These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

Note:

Specifications and the design are subject to possible modification without notice due to improvements.

DEH-55/EW, EI, DEH-55SDK/WG

General	
Power source 14.4 V DC (10.8–15.	.6 V allowable)
Grounding system	
Max. current consumption	
Dimensions (chassis) 180 (W) x 50 (H)	
(nose) 170 (W) x 46 (H	
Weight	
Amplifier	
Max. power output 20 W	/ + 20 W (FIA.I)
Continuous power output	
·	6 dist. at 1 kHz)
Load impedance	
Max. output level/	O 12 GIIOWGDIC/
output impedance (pre out)	250
Tone controls (bass)	
(treble)	
Loudness contour + 10 dB (100 Hz), -	
	lume: -30 dB)
CD Player	
System Compact disc	c audio system
Usable discs	
Signal format Sampling frequency	
_ Number of quantization	
Frequency characteristics 5–20,0)00 Hz (± 1 dB)
Signal-to-noise ratio 85 dB (1 kHz) (I	
Dynamic range	. 87 dB (1 kHz)
Wow and flutter Below meas	urement range
Distortion factor	% (1 kHz, 0 dB)
Number of channels	2 (stereo)

Frequency range	8/.5-108 MHz
Usable sensitivity	dBf (1.1 μV//5 Ω, mono)
50 dB quieting sensitivity 17	dBf (1.9 μV//5 Ω, mono)
Signal-to-noise ratio	. 70 dB (IEC-A network)
Distortion	(at 65 dBf, 1kHz, stereo)
Frequency response	. 30-15,000 Htz (± 3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)
MW tuner	

Us

FM tuner

Frequency range	531—1,602 kHz
Usable sensitivity	
Selectivity	50d B (± 9 kHz)
LW tuner	
F	1000 000 111

Fre

equency range											 		 			15	53-	-28	1 k	Hz
sable sensitivity																				
electivity	 	 . ,		•	•			 •	•	4	•	•		• •	•	50 dE	3 (± 5	k	łz)

Specifications and the design are subject to possible modification without notice due to improvements.

2. ELECTRICAL PARTS LIST

NOTE

 For your parts Stock Control, the fast moving items are indicated with the marks ** and *.

: GENERALLY MOVES FASTER THAN *.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

 Chin Pariette

Chip Resistor

RS1/8S IIIIJ, RS1/10S IIIIJ Chip Capacitor (except for COS.....) CKS....., CCS....., CSZS.....

		mber :	M 11-:-/	no pw pr)		CAPAC	ITO	RS									
It h	Nai	me : /	am unit(UC, EW, EI)		Mark	Z#2:		== C	ircuit	Symbo	ol & l	lo.		Part	Наме	Part No.
SCELI	LA	NEOUS		•			_										
										23 228							CK26AB103K2
rk ==	==:	*****	Circuit	Symbol & No. ==== Part Name	Part No.			202 2									CKSQYB332K5
										16 219	226						CKSQYF473Z5
* [0					PA4010				208 2	10							CKSQYB223K5
ŧ Q					2SK435		C :	206 2	207								CCSQCH820J5
-		202			2SC2458		_										
		203 204			DTC124ES		C :										CEA010M50LI
* D		201 202			1S2473VH		C										CCSQCH470J
							C										CEA2R2M35NI
₽ D				Variable Capacitance Diode	SVC203-AB		C										CCSQCH430J
		204 205			155133		C	221									CCSQCH100D
		201		Ferri-Inductor, 1mH	CTF1026		_										
_		202		Ferri-Inductor, 22 μ H	LAU220K		C										CSZA010K25
L		203		Ferri-Inductor. 47 μ H	LAU470K		C										CEA470M16L
							С										CK26AB333K
		204		Ferri-Inductor, 4.7 μ H	LAU4R7K		C										CEA4R7M35L
T	•	201		Coil	CTB1020		С	229									CEA470M16L
T	•	202		Coil	CTB1004												
T	•	203		Coil	CTB1022		C	230									CEA220M6R3
					(CTB1021)		С	232									CCSQCH220J
T		204		Coil	CTE1013												
					(CTE1006)	Unit	Nu	mber	:								
T		205		Coil	CTE1014	Unit	Na	ne	: FN	Unit(UC, EW	.E1)					
					(CTE1007)												
Ţ		206		Coil	CTE1015	MISC	ELLA	NEOU:	S		٠						
					(CTE1008)	Mark		====	(i zani t	Cumb.	al 8-1	No.		- Done	Nama	Part No.
С	F	201		Filter	CTF1027						3720		- -			Hame	
					(CTF1041)	**	IC	10	JC)								CWW1116
					, ,		IC	51									
C	F	202		Filter	CTF-100	**											L.A1140B
-		202		Filter Crystal Resonator	CTF-100 CSS1014		IC	101									LA1140B LA2110
-		202 201		Filter Crystal Resonator	CTF-100 CSS1014	**											LA2110
X	(201				**	IC					Chip	Tra	nsist	tor		LA2110 LA3430P
X T212	(ROT	201 RS		Crystal Resonator	CSS1014	**	IC Q	151				Chip					LA2110 LA3430P 2SA1162
X T212	(ROT	201 RS	Circui		CSS1014	**	IC Q	151				Chip	Tra	nsist	tor		LA2110 LA3430P 2 SA1162 DTC124EK
X SIST rk =	TOR	201 RS	Circuit	Crystal Resonator	CSS1014 Part No.	**	IC Q Q	151 1 2 51				Chip Chip	Tra	nsist nsist	tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712
X SIST rk =	TOR	201 RS	Circui	Crystal Resonator	CSS1014	**	IC Q Q Q	151 1 2 51 71				Chip	Tra	nsist nsist	tor tor		LA2110 LA3430P 2 SA1162 DTC124EK
SIST rk =	TOR	201 RS	Circuit	Crystal Resonator	CSS1014 Part No.	**	IC Q Q	151 1 2 51 71				Chip Chip	Tra	nsist nsist	tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712
SIST rk = R	ror R	201 RS		Crystal Resonator	Part No. RS1/10S220J	**	IC Q Q Q Q Q	151 1 2 51 71	51			Chip Chip	Tra: Tra: Tra:	nsist nsist nsist	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106
X SIST rk = R R	ror	201 RS ====== 201 202		Crystal Resonator	Part No. RS1/10S220J RS1/10S681J	**	IC Q Q Q Q Q	151 1 2 51 71 151	5 1			Chip Chip Chip	Tra: Tra: Tra:	nsist nsist nsist	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473VH
X SIST rk = R R R	ror	201 RS 201 202 203 206		Crystal Resonator	Part No. RS1/10S220J RS1/10S681J RS1/10S222J	**	IC Q Q Q Q Q	151 1 2 51 71 151	51			Chip Chip Chip	Trai	nsist nsist nsist	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473VH
X SIST rk = R R R	ror	201 RS 201 202 203 206 204		Crystal Resonator	Part No. RS1/10S220J RS1/10S681J RS1/10S222J RS1/10S473J	**	IC Q Q Q D L	151 1 2 51 71 151				Chip Chip Chip	Trai	nsist nsist nsist . 15 μ	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473YH LAU150K
SIST R R R R	TOR	201 RS 201 202 203 204 205		Crystal Resonator	Part No. RS1/10S220J RS1/10S681J RS1/10S222J RS1/10S473J RS1/10S470J	**	IC Q Q Q Q D L	151 1 2 51 71 151 1				Chip Chip Chip Indu	Trai	nsist nsist nsist . 15 μ	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473YH LAU150K
X SIST R R R R R	TOR	201 RS 201 202 203 206 204		Crystal Resonator	Part No. RS1/10S220J RS1/10S681J RS1/10S222J RS1/10S473J RS1/10S470J RS1/10S472J	**	IC Q Q Q Q D L	151 1 2 51 71 151 1 51 51				Chip Chip Indu Coil Cera	Tra Tra Tra ctor	nsist nsist nsist . 15 μ	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473YH LAU150K CTC1029 CTF-182
X SIST Tk = - R R R R R	ror	201 RS 201 202 203 206 204 205 207 208 211		Crystal Resonator	Part No. RS1/10S220J RS1/10S681J RS1/10S222J RS1/10S473J RS1/10S470J RS1/10S822J RS1/10S103J	**	IC Q Q Q D L T CF CR	151 1 2 51 71 151 1 51 51				Chip Chip Indu Coil Cera	Tra Tra Tra ctor	nsist nsist nsist . 15 μ	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473YH LAU150K CTC1029 CTF-182 CWW-107
SIST R R R R R R	TOR	201 RS 201 201 202 203 206 204 205 207 208 211 209		Crystal Resonator	Part No. RSI/10S220J RSI/10S281J RSI/10S222J RSI/10S473J RSI/10S470J RSI/10S822J RSI/10S103J RDI/4PS470JL	**	IC Q Q Q D L T CF CR	151 1 2 51 71 151 1 51 51				Chip Chip Indu Coil Cera	Tra Tra Tra ctor	nsist nsist nsist . 15 μ	tor tor tor		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473VH LAU150K CTC1029 CTF-182 CWV-107 CSS1028
XX SIST TR = R R R R R R R	TOR	201 RS 201 201 202 203 206 204 205 207 208 211 209 210		Crystal Resonator	Part No. RSI/10S220J RSI/10S681J RSI/10S222J RSI/10S473J RSI/10S470J RSI/10S822J RSI/10S103J RDI/4PS470JL RSI/10S682J	**	Q Q Q D L T CF CR X	151 1 2 51 71 151 1 51 51	52			Chip Chip Chip Induc Coil Ceras	Train Train Train Train Train Train Contract Train Contract Train Contract Train Tra	nsist nsist nsist . 15 µ Filte	tor tor tor H er		LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473YH LAU150K CTC1029 CTF-182 CWW-107 CSS1028
SIST R R R R R R R R	TOR	201 RS 201 201 202 203 206 204 205 207 208 211 209		Crystal Resonator	Part No. RSI/10S220J RSI/10S281J RSI/10S222J RSI/10S473J RSI/10S470J RSI/10S822J RSI/10S103J RDI/4PS470JL	**	Q Q Q D L T CF CR X	151 1 2 51 71 151 1 51 101 151	52 (IC))		Chip Chip Chip Induc Coil Ceran Ceran	Traintraintraintraintraintraintraintraint	nsist nsist nsist .15 μ Filte Oscil	tor tor tor :H er liator	3)	LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473YH LAU150K CTC1029 CTF-182 CWW-107 CSS1028 (CSS1022) CCP-325
XX SIST RR RR RR RR RR RR RR	TOR	201 RS		Crystal Resonator	Part No. RS1/10S220J RS1/10S681J RS1/10S681J RS1/10S473J RS1/10S470J RS1/10S470J RS1/10S822J RS1/10S103J RD1/4PS470JL RS1/10S682J RS1/8S223J	**	Q Q Q D L T CF CR X	151 1 2 51 71 151 1 51 101 151	52 (C) (EW, E1)		Chip Chip Chip Induc Coil Ceran Ceran Semi-	Traintraintraintraintraintraintraintraint	nsist nsist nsist . 15 μ Filte Oscill ed. 33 ed. 10	tor tor : H er liator 3kΩ(B	3)	LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473VH LAU150K CTC1029 CTF-182 CWW-107 CSS1028 (CSS1022) CCP-325 CCP-322
SIST TR = R R R R R R R	TOR	201 RS 201 201 202 203 206 204 205 207 208 211 209 210		Crystal Resonator	Part No. RSI/10S220J RSI/10S681J RSI/10S222J RSI/10S473J RSI/10S470J RSI/10S822J RSI/10S103J RDI/4PS470JL RSI/10S682J	**	Q Q Q D L T CF CR X	151 1 2 51 71 151 1 51 101 151	52 (C) (EW, E1)		Chip Chip Induction Coil Ceran Ceran Semi- Semi- Semi-	Tran Tran Tran Tran Tran Tran Tran Tran	nsist nsist nsist .15 μ Filte Oscil ed. 33 ed. 10 ed. 10	tor tor tor :H er liator	3) 3) 3)	LA2110 LA3430P 2SA1162 DTC124EK 2SC2712 2SJ106 1S2473VH LAU150K CTC1029 CTF-182 CWW-107 CSS1028 (CSS1022) CCP-325

RESISTORS		Unit	N	umbe	er:				
Mark ====== Circuit Symbol & No. ==== Part Name	Part No.	Unit	N	lane	:	Tuner Unit (WG))		
R 2 7 152	RS1/10S223J	MISC	ELL	ANEC	SUC		;		
R 3(UC)	RS1/10S473J	Mark	-			Circuit Symbo	1 & No.	==== Part Name	Done No
R 4 58 104	RS1/10S682J					Circuit Symbo	or ar no.	rait name	rart no.
R 5(UC)	RS1/10S0R0J	**	10	5 5 1					1444400
R 5(EW, E1)	RS1/10S471J			10.1	-				LA1140B
(04, 51)	NOT/ 1004413								KHA115
R 6(UC)	DC1 /001541			201					MX3S400
R 6(EW, EI)	RS1/8S153J								PA4010
	RS1/8S681J	**	IC	801	L				KHA142
	RS1/8SOROJ								
R 23	RS1/10SOROJ	**	-	1			_	ansistor	2SA1162
R 51	RS1/8SOROJ	**		- 2			-	ansistor	DTC124EK
		**	-				Chip Tr	ansistor	2SC2712
R 52	RS1/10S331J	**	Q	71	l				2SJ 105
R 53 57	RS1/10S473J	**	Q	201	l				25K 435
R 54	RS1/10S104J								
R 55 60	RS1/10S153J	**	Q	202	2				2SC2458
R 56	RS1/8S123J				204	205			DTC 124ES
				151			Chip Di	ode	MA151WA
R 59	RD1/4PS183JL				202	!			182 473VH
R 61 62	RS1/10S472J		D	203			ible Can	acitance Diode	SVC 203-AB
R 71 .	RS1/10S474J		•			70111	iore dab	actrance blode	31C 2U3-AD
R 101	RS1/10S332J		Д	204	205	:			100100
R 102		•	Ĺ		51		Inducto	_	155 133
r 102	RS1/10S392J					•	_		LAU 150K
D 100			ŗ	201			Ferri-I		CTF 1026
R 103	RS1/10S183J			202			Ferri-I		LAU 220K
R 151	RS1/10S222J		L	203	\$		Ferri-I	nductor	LAU470K
R 153	RS1/8S472J								
R 156(UC) 157(UC)	RS1/10S202J		L	204	l		Ferri-l	nductor	LAU 4R7K
R 156(EW, EI) 157(EW, EI)	RS1/10S332J		T	51			Coil		CTC 1029
			T	201	Ļ		Coil		CTB 1020
R 158	RS1/10S334J		Ţ	202	:		Coil		CTB 1004
			Ţ	203	1		Coil		CTB 1022
CAPACITORS							****		(CTB1021)
									(01.02.0017
Mark ====== Circuit Symbol & No. ==== Part Name	Part No.		Ţ	204	l		Coil		CTE 1013
	-								(TE1006)
C 1	CKSQYB102K50		T	205	i		Coil		CTE 1014
C 2 101 102	CKSQYB103K25								(TE1007)
C 4 51 52 53 54 59	CKSQYF473Z50		T	206	i		Coil		CTE 1015
C 55 62	CCSQSL330J50								(TE1008)
C 56 63	CEAR47M50LS2								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
•			CF	51	. 52		Ceramic	Filter	CTF-182
C 57	CKSQYF104Z25			201			Ceramic		CTF 1041
C 58 156	CEA010M50LS2								(TF1027)
C 60	CCSQSL101J50		CF	202)		Filter		
C 61	CEA4R7M16NPLL		O.	202	•		rifter		CTF-100
C 70			٧	20			Coverage 1	December	00 1014
0 10	CCSQCH200J50		^	20	L		CLAZISI	Resonator	CIS 1014
C 103 105 161	CEATOMICIC		v	80	1		Ca===2 -	Resonator	MC 1010
C 104	CEA470M16LS	**			1 152	,			CS 1019
C 151	CKSQYB182K50			10		4		xed 10kΩ (B)	CP - 322
C 152	CKSYF473Z50			15				xed 15kΩ(B)	C:P-323
	CKSQYB332K50	**						xed 150kΩ (B)	C:P -329
C 153	CKSQYB223K25		ü	50	ı		ourge P	rotector	DSP-201M-S00E
C 154	CKSQYBL53K25						Front P	and Unit	OB 1032
							. Tont E	and Ullit	AD 1037
	CEASRSMSOLS								
C 157	CSZAR22M35								
C 158(EW, EI)	CCSQSL681150								
C 159(UC) 160(UC)	CKSYB393K25								
a decimal and the second									
C 159(EW, EI) 160(EW, EI)	CKSYB183K25								

				-				A1EK								лане	Part No.
rk ==	2222	122	Circu	it Symbol &	No. =	=== Part	Name Part No.		C 2								CSZAO LOK 25
							DC1 /0C0001		C 2			3					CEA470M16LS
R							RS1/8S223J		C 2								CKSQYB333K2
R							RS1/8S682J		C 2								CEA4R7M35LS
R							RS1/8S471J		C 2	29							CEA470M16LS
R							RS1/10S681J			••							001 000110001
R	7						RS1/10S223J		C 2								CEA220M6R3L
									C 2								CCSQCH22015
R		51					RS1/10S0R0J		C 8								CQMA683J50
R	52						RS1/10S331J		C 8			22	20 μ F/1	OA			CCH1015
R	53	57	802				RS1/10S473J		C 8	04							CEA4R7M35LS
R							RS1/10S104J										
R	55	60					RS1/10S153J		C 8								CEA220M16LS
_									C 8	06							CSZAR33M35
R	56						RS1/10S123J										
R							RS1/10S682J			_							
R							RD1/4PS183JL			ber :							
R		62					RS1/10S472J	Unit	Kan	e :	Amp Unit						
R	71						RS1/10S474J										
								MISCE	ELLAN	EOUS							
	101						RS1/10S332J								_		
	102						RS1/8S183J	Mark	====	=====	Circuit	Symbol	& No.	====	Part	Name	Part No.
	103						RS1/8S562J										
	201						RS1/10S220J		IC 5								TA8215L
R	202						RS1/10S681J	**	Q 5	51							2SD1859
									D 5	51		CI	hip Dic	xde			MA3091-L
R	203	206					RS1/10S222J		L 5	51		CI	hoke Co	oi l			CTH1023
R	204						RS1/10S473J		R 5	51 552	2						RS1/10S682.
R	205						RS1/10S470J										
R	207						RS1/10S822J		R 5	53 554							RS1/10S123
R	208	211					RS1/10S103J		R 5	55 556	3						RD1/4PS181.
									R 5	57 558	559 560						RD1/4PS4R7
R	209						RD1/4PS470JL										
	210						RS1/10S682J		R 5	61							RS1/10S821J
	212						RS1/8S223J			62 563	566						RS1/8SOROJ
	213									42 000							A31/050E03
	801						RD1/4PS222JL		D E	64 565	:						DC1 /1050D01
А	901						RS1/10S222J			51 552							RS1/10S0R0.
101	MDC								C E								
ACI	ORS								C 5								CCSQSL271J
			Circu	it Symbol &	No. =	=== Part	Name Part No.		C 5	55 556	571						CEA4R7M35LI CCSQSL271J5 CEA470M10LI CQEA224J63
PACI*			Circu	it Symbol &	No. =	=== Part	Name Part No.		C 5	55 556							CCSQSL271J5
			Circu	it Symbol &	No. =	=== Part	Name Part No. CKSQYB102K50		C 5	55 556 57 558	571		000 μ F/	⁄16∀			CCSQSL271J
rk ==	1			it Symbol &	No. =	=== Part			C 5	55 556 57 558 69	571	10	000 μ F/ 20 μ F/1				CCSQSL271J3 CEA470M10L1 CQEA224J63
k == 	1 2			it Symbol &	No. =	Part	CKSQYB102K50		C 5	55 556 57 558 69 70	571	10					CCSQSL271J5 CEA470M10LI CQEA224J63 CCH-124
k == C C	1 2 4	802 54			No. =	=== Part	CKSQYB102K50 CKSQYB103K50		C 5 C 5 C 5	55 556 57 558 69 70	571	10					CCSQSL271J3 CEA470M10L1 CQEA224J63 CCH-124 CCH1014
k == C C	1 2 4	802 54			No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50		C 5 C 5 C 5	55 556 57 558 69 70	571	10					CCSQSL271J3 CEA470M10L1 CQEA224J63 CCH-124 CCH1014
k == C C	1 2 4 51	802 54 52	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50		C 5 C 5 C 5	55 556 57 558 69 70	571	10					CCSQSL271JI CEA470M10LI CQEA224J63 CCH-124 CCH1014
c c c	1 2 4 51	802 54 52	53		No. =	Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50	Unit	C 5 C 5 C 5 C 5	55 556 57 558 69 70 72	5 571 3 559 560	10 22	20 μ F/1				CCSQSL271J3 CEA470M10L1 CQEA224J63 CCH-124 CCH1014
c c c	1 2 4 51	802 54 52	53		No. =	Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50	Unit	C 5 C 5 C 5 C 5	55 556 57 558 69 70 72	571	10 22	20 μ F/1				CCSQSL271JI CEA470M10LI CQEA224J63 CCH-124 CCH1014
c c c c	1 2 4 51 55	802 54 52 62	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CKSQYF473Z50	Unit Unit	C 5 C 5 C 5 C 5 Num	55 556 57 558 69 70 72 ber :	5 571 3 559 560	10 22	20 μ F/1				CCSQSL271JI CEA470M10LI CQEA224J63 CCH-124 CCH1014
k = CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	1 2 4 51 55 56 57	802 54 52 62 63	53		No. =	Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50	Unit Unit	C 5 C 5 C 5 C 5 Num	55 556 57 558 69 70 72	5 571 3 559 560	10 22	20 μ F/1				CCSQSL271J3 CEA470M10L1 CQEA224J63 CCH-124 CCH1014
k == C C C C C C C C	1 2 4 51 55 56 57 58	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2	Unit Unit MISC	C 5 C 5 C 5 C 5 Num Nam	55 556 57 558 69 70 72 ber : ie :	5 571 3 559 560 Power Su	1(22 , pply Un:	20μF/1	roa	Part	None	CCSQSL271J; CEA470M10LI CQEA224J63 CCH-124 CCH1014 CKSYF473Z56
k == - C C C C C C C C C	1 2 4 51 55 56 57 58 60	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50	Unit Unit MISC	C 5 C 5 C 5 C 5 Num Nam	55 556 57 558 69 70 72 ber : ie :	5 571 3 559 560 Power Su	1(22 , pply Un:	20μF/1	roa	Part	Name	CCSQSL271J3 CEA470M10L1 CQEA224J63 CCH-124 CCH1014
k == C C C C C C C	1 2 4 51 55 56 57 58 60	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2	Unit Unit MISCI Mark	C 5 C 5 C 5 C 5 C 5 C 5	55 556 57 558 69 70 72 bber : ie :	5 571 3 559 560 Power Su	1(22 , pply Un:	20μF/1	roa	Part	Name	CCSQSL271J: CEA470M10LI CQEA224J63 CCH-124 CCH1014 CKSYF473Z5
k == 0 C C C C C C C C C C C C C C C C C	1 2 4 51 55 56 57 58 60 61	802 54 52 62	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL	Unit Unit MISCI Mark	C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5	55 556 57 558 69 70 72 ber : EOUS	5 571 3 559 560 Power Su	1(22 , pply Un:	20μF/1	roa	Part	Name	CCSQSL271J: CEA470M10LI CQEA224J63 CCH-124 CCH1014 CKSYF473Z50
c c c c c c c c c c c c c c c c c c c	1 2 4 51 55 56 57 58 60 61	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50	Unit Unit MISCI Mark	C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5	55 556 57 558 69 70 72 ber : EOUS EOUS 51	5 571 3 559 560 Power Su	1(22 , pply Un:	20μF/1	roa	Part	Name	CCSQSL271J; CEA470M10L; CQEA224J63 CCH-124 CCH1014 CKSYF473Z50 Part No. M5F7809M AN6540
k == - c c c c c c c c c c c c c c c c c	1 2 4 51 55 56 57 58 60 61	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS	Unit Unit MISCI Mark 	C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5	55 556 57 558 69 70 72 ber : EOUS ====== 151 152 153	5 571 3 559 560 Power Su Circuit	1(22 , pply Un:	20μF/1	roa	Part	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. MSF7809M AN6540 AN7805R
k == - c c c c c c c c c c c c c c c c c	1 2 4 51 55 56 57 58 60 61	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50	Unit Unit MISCI Mark ** **	C S C S C S C S C S C S C S C S C S C S	55 556 57 558 69 70 72 ber : EOUS EOUS 151 152 153 151 953	5 571 3 559 560 Power Su Circuit	1(22 , pply Un:	20μF/1	roa	Part	Name	CCSQSL271J: CEA470M10LI CQEA224J63 CCH-124 CCH1014 CKSYF473Z50 Part No. MSF7809M AN6540 AN7805R 2SB1243
k == c c c c c c c c c c c c c c c c c c	1 2 4 51 55 56 57 58 60 61 70 101 152	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50 CKSQYB153K25	Unit Unit MISCI Mark ** **	C S C S C S C S C S C S C S C S C S C S	55 556 57 558 69 70 72 ber : EOUS ====== 151 152 153	5 571 3 559 560 Power Su Circuit	1(22 , pply Un:	20μF/1	roa	Part	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. MSF7809M AN6540 AN7805R
k == - c c c c c c c c c c c c c c c c c	1 2 4 51 55 56 57 58 60 61	802 54 52 62 63	53		No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50	Unit Unit MISCI Mark 	C S C S C S C S C S C S C S C S C S C S	55 556 57 558 69 70 72 The :: EOUS ::::::::::::::::::::::::::::::::::::	5 571 3 559 560 Power Su Circuit	pply Uni	it & No.			Name	CCSQSL271J: CEA470M10LI CQEA224J63 CCH-124 CCH1014 CKSYF473Z50 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238
c c c c c c c c c c c c c c c c c c c	1 2 4 4 51 55 56 57 58 60 61 152 154 159	802 54 52 62 63	53	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB33ZK50 CKSQYB133K25 CKSYB123K50	Unit Unit MISCI Mark ** ** **	C S C S C S C S C S C S C S C S C S C S	55 556 57 558 69 70 72 bber : : : : : : : : : : : : : : : : : : :	5 571 3 559 560 Power Su Circuit	pply Un:	it & No	ansisto	 or	Name	CCSQSL271J; CEA470M10Li CQEA224J63 CCH-124 CCH1014 CKSYF473Z56 Part No. M5F7809M AN6540 AN7805R 2SB1238
k ==	1 2 4 51 55 56 57 58 60 61 152 154 159 201	802 54 52 62 63 105	53 161	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50 CKSQYB153K25 CKSQYB123K50 CKSQYB123K50	Unit Unit MISCI Mark ** ** ** **	C S C S C S C S C S C S C S C S C S C S	55 556 57 558 69 70 72	Fower Su Circuit	pply Uni	it & No. hip Tra	ansistc	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238
k == - C C C C C C C C C C C C C C C C C	1 2 4 4 51 55 56 57 58 60 61 152 154 159	802 54 52 62 63 105	53 161	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB33ZK50 CKSQYB133K25 CKSYB123K50	Unit Unit MISCI Mark ** ** ** **	C S C S C S C S C S C S C S C S C S C S	55 556 57 558 69 70 72 :	Fower Su Circuit	pply Uni	it & No	ansistc	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238
-k =	1 2 4 4 51 55 5 56 57 58 60 61 152 154 159 201 202 202 202 202 202 202 202 202 202	802 54 52 62 63 105 160 209 212	53 161	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50 CKSQYB153K25 CKSQYB123K50 CKSQYB123K50	Unit Unit MISCI Mark ** ** ** **	C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5	55 556 69 70 72	Fower Su Circuit 955	Symbol Ci	it & No. hip Tra	ansistc	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238
-k =	1 2 4 4 51 55 5 56 57 58 60 61 152 154 159 201 202 202 202 202 202 202 202 202 202	802 54 52 62 63 105 160 209 212 215	53 161 223 2	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA47M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB32K50 CKSQYB153K25 CKSQYB123K50 CKSQYB123K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB33ZK50	Unit Unit MISCI Mark ** ** ** **	C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5	55 556 69 70 72	Fower Su Circuit	Symbol Ci	it & No. hip Tra	ansistc	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238 2SC2712 UN2210 UN2212 ERC05-10B
	1 2 4 4 51 55 5 56 57 58 60 61 152 154 159 202 203 202 203	802 54 52 62 63 105 160 209 212 215 208	53 161 223 2 216 2 210	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA47M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB32K50 CKSQYB153K25 CKSYB123K50 CKSQYB133K50	Unit Unit MISCI Mark ** ** ** **	C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5	55 556 69 70 72	Fower Su Circuit 955	Symbol Ci	it & No. hip Tra	ansistc	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238 2SC2712 UN2210 UN2212 ERC05-10B
	1 2 4 4 5 1 5 5 5 6 5 7 7 5 8 6 0 0 1 0 1 1 5 2 1 5 4 1 5 9 2 0 2 0 3 2 0 4 2 0 2 0 3 2 0 4	802 54 52 62 63 105 160 209 212 215 208	53 161 223 2 216 2 210	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA47M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50 CKSQYB153K25 CKSQYB153K25 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB13XK50 CKSQYB133K50 CKSQYB133K50 CKSQYB223K50	Unit Unit MISCI Mark ** ** ** **	C S C S C S C S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S	55 556 57 558 69 70 72 ber : EOUS EOUS 1552 1552 1552 1552 1552 1553 1552 1553 1552 1553 1552 1553 1	Fower Su Circuit 955	pply Un: Symbol CI CI CI CI CI Sp6 95	it & No. hip Tra	==== ansisto	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238 2SC2712 UN2210 UN2212 ERC05-10B
k ==	1 2 4 4 5 1 5 5 5 6 5 7 7 5 8 6 0 0 1 0 1 1 5 2 1 5 4 1 5 9 2 0 2 0 3 2 0 4 2 0 2 0 3 2 0 4	802 54 52 62 63 105 160 209 212 215 208 207	53 161 223 2 216 2 210	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR47M50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA47M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50 CKSQYB153K25 CKSQYB153K25 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB13XK50 CKSQYB133K50 CKSQYB133K50 CKSQYB223K50	Unit Unit MISCI Mark ** ** ** **	C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5 C 5	55 556 57 558 69 70 72 ber : EOUS EOUS 1552 1552 1552 1552 1552 1553 1552 1553 1552 1553 1552 1553 1	Fower Su Circuit 955	pply Uni Symbol Ci Ci Ci 956 95	it & No. hip Trahip Trahip Tra	==== ansisto ansisto ansisto	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238 2SC2712 UN2210 UN2212 ERC05-10B ERA15-02VH
k == cc c c c c c c c c c c c c c c c c	1 2 4 4 5 1 5 5 5 6 5 7 7 5 8 8 6 0 6 1 1 5 2 2 1 5 4 1 5 9 2 2 2 3 3 2 2 4 4 2 2 6 6	802 54 52 62 63 105 160 209 212 215 208 207	53 161 223 2 216 2 210	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50 CKSQYB153K25 CKSQYB153K25 CKSQYB153K25 CKSQYB153K25 CKSQYB123K50 CKSQYB13X50 CKSQYB13ZK50 CKSQYB123K50 CKSQYB123K50 CKSQYB123K50 CKSQYB223K50 CCSQCH820J50	Unit Unit MISCI Mark ** ** ** **	C S C S C S C S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S	55 556 57 558 69 70 72 ber : EOUS EOUS 1552 1552 1552 1552 1552 1553 1552 1553 1552 1553 1552 1553 1	Fower Su Circuit 955	pply Uni Symbol Ci Ci Ci 956 95	it & No. hip Trahip Trahip Tra	==== ansisto ansisto ansisto	or or	Name	CCSQSL271J CEA470M10L CQEA224J63 CCH-124 CCH1014 CKSYF473Z5 Part No. MSF7809M AN6540 AN7805R 2SB1243 2SB1238 2SC2712 UN2210 UN2210 UN2212 ERC05-10B ERA15-02VH
	1 2 4 4 5 1 5 5 5 6 6 5 7 7 5 8 8 6 0 6 1 1 5 2 2 2 2 2 2 2 2 2 2 2 2 4 2 2 6 6 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	802 54 52 62 63 105 160 209 212 215 208 207	53 161 223 2 216 2 210	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CCSQSL330J50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCE200J50 CEA470M16LS CKSQYB153K25 CKSQYB153K25 CKSQYB153K25 CKSQYB133K50 CKSQYB133K50 CKSQYB133K50 CKSQYB13K50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB13SC50 CKSQYB12SC50 CKSQYB13SC50 CKSQYB1SC50 CKSQXB1SC50 CKSQXB	Unit Unit MISCI Mark ** ** ** **	C S C S C S C S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S	55 556 57 558 69 70 72 ber : EOUS EOUS 1552 1552 1552 1552 1552 1553 1552 1553 1552 1553 1552 1553 1	Fower Su Circuit 955	pply Uni Symbol Ci Ci Ci 956 95	it & No. hip Trahip Trahip Tra	==== ansisto ansisto ansisto	or or	Name	CCSQSL271J: CEA470M10LI CQEA224J63 CCH-124 CCH1014 CKSYF473Z50 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238 2SC2712 UN2210 UN2210 UN2212 ERC05-10B ERA15-02VH CTH1015
k = 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 2 4 4 5 1 5 5 5 6 6 5 7 7 5 8 8 6 0 6 1 1 5 2 2 2 2 2 2 2 2 2 2 2 2 2 4 2 2 6 6 1 2 1 2 1 3 2	802 54 52 62 63 105 160 209 212 215 208 207	53 161 223 2 216 2 210	59	No. =	=== Part	CKSQYB102K50 CKSQYB103K50 CKSYF473Z50 CKSQYF473Z50 CKSQYF473Z50 CCSQSL330J50 CEAR4TM50LS2 CKSQYF104Z25 CEA010M50LS2 CCSQSL101J50 CEA4R7M16NPLL CCSQCH200J50 CEA470M16LS CKSQYB332K50 CKSQYB153K25 CKSQYB153K25 CKSQYB133K25 CKSQYB133K25 CKSQYB103K50 CKSQYB13K25 CKSQYB103K50	Unit Unit MISCI Mark ** ** ** **	C S C S C S C S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S S C S	55 556 57 558 69 70 72 ber : EOUS EOUS 1552 1552 1552 1552 1552 1553 1552 1553 1552 1553 1552 1553 1	Fower Su Circuit 955	pply Uni Symbol Ci Ci Ci 956 95	it & No. hip Trahip Trahip Tra	==== ansisto ansisto ansisto	or or	Name	CCSQSL271J; CEA470M10LI CQEA224J63 CCH-124 CCH1014 CKSYF473Z56 Part No. M5F7809M AN6540 AN7805R 2SB1243 2SB1238 2SC2712 UN2210 UN2210 UN2212 ERC05-10B ERA15-02VH CTH1015

RESIS	TORS					Mark			Circu	iit S	Symbo	01 & NO.	====	Part N	iane	Part No.
Mark	====:	==== C	ircuit	Symbol & No. ==== Part i	Vame Part No.			510 51				Chip Tr				DTC114TU
						**	Q	512 51	3			Chip Tr	ansist	OF		RN2427
				961 968	RS1/10S223J			514 75								2SD1226MF
		53 (EW, EI	, WG)		RS1/10S152J	**	Q	515 (WG)							2SD1226MF
	R 9	54 (UC)			RS1/10S152J	**	Q	601 65	1 652 6	553		Chip Tr	ansist	OF		UN2211
	R 9	56 958 9	60		RS1/10S222J											
	R 96	62			RS1/10S152J	**	Q	701 70	5 756 7	760		Chip Tr	ansist	от		UN2211
					,			702 70				Chip Tr				UN2111
	R 96	63			RS1/10S333J			703 70				Chip Tr				
	R 96						•		•			onth it	ansisc	OI.		2SD1048
		56 967			RS1/10S104J	**	0	851 85	2 855 R	56		Chip Tr	aneieta	\F		DTC343TK
	R 96				RS1/10S153J		-	853		-		Chip Tr				
	W 30	33			RS1/10S103J	**	•	000				CHIP II	ansiste	or		2SD1819
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lark	#####	===== (ircuit	Symbol & No. ==== Part	Mame Part No.			451 (WG				Chip Di	ode			MA141WA
						*	D	452 45	3			Chip Di	ode			MA3056-L
1	C 95	51 952 9	58		CEA010M50LS2	*	D	501 50	2 503			Chip Di	ode			MA141WK
1	C 95	53		1000 µ F/16V	CCH1003											
		54 957		2200 µ F/16V	CCH1001	*	D	504				Chip Di	ode			MA143
	- "	- 4 401		2240 K L\ T04	CON 1001			505				-				
									069			Chip Di				MA3056-M
	C 95			470 µ F/16V	CCH-114			506 85	032			Chip Di	ode			MA141WA
(C 95	6	•		CEA101M10L2			651								ERA15-02
						*	D	652								ERA82-004Y
(C 95	9 (UC)			CEA101M16L2											
		9 (EW. EI	. WG)		CEATOIMIOLL	*	D	653 65	655 6	56 6	57 6	58 659				ERA82-004VE
	C 96		/			*	D	661 66	2							HZS2ALL
		31 962 9			CEA470M16LS			701				Chip Di	ode			WA 151WA
			03 304		CKSQYB153K50			753				Chip Di				
,	C 96	5 966			CCG-105			754				CHIP DI	ode			MA3200-M
						•	u	194								HZ6LB1
- 1	C 96	57			CEA102M16L2											
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	Nueb	er :					Ĺ				1		nduc tor	•		
ni t			Unit			·	L L	501				Ferri-l	nductor oil	•		CTH1035
ni t		per :	Unit				L L TH	501 651				Ferri-U Choke C Thermis	nductor oil ter	•		CTH1035 CCX1001
nit nit	Name	: CD	Unit				L L TH	501 651 351				Ferri-l Choke C	nductor oil ter			CTH1035
nit nit	Name	: CD	Unit				L L TH TH	501 651 351 751				Ferri-U Choke C Thermis	nductor oil ter			CTH1035 CCX1001 CCX-021
nit nit ISCEI	Name LLANE	: CD					L L TH TH	501 651 351 751 851 (UC)				Ferri-U Choke C Thermis	nductor oil ter	·		CTH1035 CCX1001 CCX-021 CWW1097
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nit nit ISCEI ark =	Name LLANE	COUS		Symbol & No. ==== Part N	ame Part No.		L TH TH IB IB	501 651 351 751 851 (UC) 851 (EW,	EI. WG)			Ferri-II Choke Co Thermis Thermis	nductor oil ter ter			CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096
nit nit ISCEI	Name	COUS C		Symbol & No. ==== Part N	ame Part No.		L TH TH IB IB	501 651 351 751 851 (UC) 851 (EW, 852 501 (EW,	EI. WG)			Ferri-li Choke Co Thermis Thermis	nductor oil ter ter	or		CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0
nit nit ISCEI ark =	Name	: CD COUS :==== C		Symbol & No. ==== Part N			L TH TH IB IB	501 651 351 751 851 (UC) 851 (EW,	EI. WG)			Ferri-II Choke Co Thermis Thermis	nductor oil ter ter	or		CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096
nit nit ISCEI ark =	Name	: CD COUS :==== C		Symbol & No. ==== Part N	CXA1081M M5218FP		L TH TH IB IB G X	501 651 351 751 851 (UC) 851 (EW. 852 501 (EW.	EI. WG)			Ferri-li Choke Co Thermis Thermis Surge Pr Crystal	nductor oil ter ter rotecto Resona	or itor		CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0
nit nit ISCEI ark =	Name	COUS COUS COUS COUS COUS COUS COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215		L TH TH IB IB G X	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 701	EI. WG)			Ferri-li Choke Co Thermis Thermis	nductor oil ter ter rotecto Resona	or itor		CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0
nit nit ISCEI ark =	Name	COUS COUS COUS COUS COUS COUS COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M		L TH TH IB IB G X	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701	EI. WG)			Ferri-li Choke C Thermis Thermis Surge P Crystal Crystal Ceramic	nductor oil ter ter rotecto Resona Resona	or ator ator		CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042
sit sit scel	Name	COUS COUS COUS COUS COUS COUS COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215		L TH TH IB IB G X	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 701	EI. WG)			Ferri-li Choke C Thermis Thermis Surge P Crystal Crystal Ceramic	nductor oil ter ter rotecto Resona Resona	or ator ator		CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042
nit nit ISCEI ark = ** ** **	Name LLANE IC 35 IC 45 IC 45 IC 50 IC 60	cous cous cous cous cous cous cous cous		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ	**	L TH TH IB IB G X	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke C Thermis Thermis Surge P Crystal Crystal Ceramic , 47kΩ (I	nductor oil ter ter rotecto Resona Oscill B) × 1, 1	or itor itor lator lokΩ(B))×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042 CCP1005
nit ISCEI ark =	Name LLANE IC 35 IC 45 IC 45 IC 50 IC 60	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ	**	L TH TH IB IB IB C X VR	501 651 351 751 851 (UC) 851 (EW. 852 501 (EW. 701 751 351 352	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Ceramic .47kΩ (I Semi-fi:	nductor oil ter ter rotecto Resona Oscill B) × 1, 1	or ator ator lator l0kΩ(B) cΩ(B)×)×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-SC CSS1030 CSS1027 CSS-042 CCP1005 CCP1006
init init IISCEI 	Name LLANE IC 35 IC 45 IC 45 IC 60 IC 65 IC 65	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ	**	L TH TH IB IB IB C X VR	501 651 351 751 851 (UC) 851 (EW. 852 501 (EW. 501 701 751 351	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke C Thermis Thermis Surge P Crystal Crystal Ceramic , 47kΩ (I	nductor oil ter ter rotecto Resona Oscill B) × 1, 1	or ator ator lator l0kΩ(B) cΩ(B)×)×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042 CCP1005
nit nit ISCEI **	Name LLANE IC 35 IC 45 IC 45 IC 65 IC 65 IC 65 IC 65	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ	**	L TH TH IB IB G X VR VR	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Crystal Ceramic . 47kΩ (I Semi-fi:	nductor oil ter ter rotecto Resona 0scill B) × 1, 1 xed, 47k xed, 2, 2	or ator lator (θkΩ (B) (Ω (B) × kΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-SC CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267
init init IISCEI ** ** ** **	Name LLANE IC 35 IC 45 IC 45 IC 60 IC 65 IC 65	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP	**	L TH TH IB IB G X VR VR	501 651 351 751 851 (UC) 851 (EW. 852 501 (EW. 701 751 351 352	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Ceramic .47kΩ (I Semi-fi:	nductor oil ter ter rotecto Resona 0scill B) × 1, 1 xed, 47k xed, 2, 2	or ator lator (θkΩ (B) (Ω (B) × kΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042 CCP1005 CCP1006
nit nit ISCEI	Name LLANE IC 35 IC 45 IC 45 IC 65 IC 65 IC 65 IC 65	e : CD COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q	**	L TH TH IB IB G X VR VR	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Crystal Ceramic . 47kΩ (I Semi-fi:	nductor oil ter ter rotecto Resona 0scill B) × 1, 1 xed, 47k xed, 2, 2	or ator lator (θkΩ (B) (Ω (B) × kΩ (B))×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267
nnit nnit ISCEI **	Name LLANE IC 35 IC 45 IC 50 IC 65 IC 65 IC 65 IC 65 IC 65	e : CD COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP	**	L TH TH IB IB G X VR VR	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Semi-fi: Semi-fi:	nductor oil ter ter rotecto Resona 0scill B) × 1, 1 xed, 47k xed, 2, 2	or ator lator (θkΩ (B) (Ω (B) × kΩ (B))×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267
nit nit ISCEI st st st st st st st st	Name LLANE L	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L	**	L TH TH IB IB G X VR VR VR	501 651 351 751 851 (UC) 851 (EW, 852 501 (EW, 501 701 751 351 352 604 651	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Semi-fi: Semi-fi:	nductor oil ter ter rotecto Resona 0scill B) × 1, 1 xed, 47k xed, 2, 2	or ator lator (θkΩ (B) (Ω (B) × kΩ (B))×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-SC CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267
nit nit 	Name LLANE L	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L	**	L TH TH IB IB G X VR VR VR	501 651 351 751 851 (UC) 851 (EW, 852 501 (EW, 501 701 751 351 352 604 651	EI. WG) EI)	≡i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Semi-fi: Semi-fi:	nductor oil ter ter rotecto Resona 0scill B) × 1, 1 xed, 47k xed, 2, 2	or ator lator (θkΩ (B) (Ω (B) × kΩ (B))×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042 CCCP1005 CCP1006 HCP-267
nnit ISCEI ark =	Name LLANE IC 35 IC 45 IC 45 IC 65 IC 65 IC 65 IC 70 IC 70 IC 70 IC 70	COUS COUS COUS COUS COUS COUS COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L	** ** ** RESI:	L TH TH IB IB IB IB IB VR VR VR	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 701 751 351 352 604 651	EI. WG) EI) Se	≖i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Ceramic . 47k \(\Omega () Semi-fi: Semi-fi: Semi-fi:	nductor oil ter ter rotecto Resona Oscill B) × 1, 1 xed, 47k xed, 2, 2	or ator ator lator lokΩ(B) cΩ(B) × ckΩ(B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CCSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007
	Name LLANE LLANE LLANE LLANE LC 35 LC 45 LC 45 LC 65 LC 65 LC 70 LC 70 LC 70 LC 70 LC 70 LC 75	COUS COUS COUS COUS COUS COUS COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L	** ** ** RESI:	L TH TH IB IB IB IB IB VR VR VR	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 701 751 351 352 604 651	EI. WG) EI) Se	≖i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Ceramic . 47k \(\Omega () Semi-fi: Semi-fi: Semi-fi:	nductor oil ter ter rotecto Resona Oscill B) × 1, 1 xed, 47k xed, 2, 2	or ator ator lator lokΩ(B) cΩ(B) × ckΩ(B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267
nit nit ISCEI ark =	Name LLANE LLANE LLANE LLANE LLANE LC 35 LC 45 LC 45 LC 50 LC 65 LC 65 LC 70 LC 70 LC 70 LC 70 LC 75 L	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$ PD6355G KHA220 PD4136B	** ** ** RESI:	L L TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651	EI. WG) EI) Se	≖i−f	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Ceramic . 47k \(\Omega () Semi-fi: Semi-fi: Semi-fi:	nductor oil ter ter rotecto Resona Oscill B) × 1, 1 xed, 47k xed, 2, 2	or ator ator lator lokΩ(B) cΩ(B) × ckΩ(B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007
	Name LLANE LLANE LLANE LLANE LLANE LC 35 LC 45 LC 45 LC 50 LC 65 LC 65 LC 70 LC 70 LC 70 LC 70 LC 75 L	COUS COUS COUS COUS COUS COUS COUS COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$ PD6355G KHA220 PD4136B M51955AFP	** ** ** RESI:	L L TH IB IB IB G X VR VR VR VR	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651	EI. WG) EI) Se	it S	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 4</td <td>CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007</td>	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007
nit nit ISCEI ark =	Name LLANE LLANE LLANE LLANE LLANE LC 35 LC 45 LC 45 LC 50 LC 65 LC 65 LC 70 LC 70 LC 70 LC 70 LC 75 L	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$ PD6355G KHA220 PD4136B	** ** ** RESI:	L L TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651	EI. WG) EI) Se	it S	ixed	Ferri-li Choke Co Thermis Thermis Surge P: Crystal Crystal Ceramic . 47k \(\Omega () Semi-fi: Semi-fi: Semi-fi:	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007
init IISCEI +++	Name LLANE L	COUS		Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$ PD6355G KHA220 PD4136B M51955AFP M51945AFP	** ** ** RESI:	L L TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651	EI. WG) EI) Se	it S	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007
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init CC =	Name LLANE IIC 35 IIC 45 IIC 65 IIC 65 IIC 70 IIC 70 IIC 70 IIC 75 IIC 75 IIC 75 IIC 75 IIC 75	COUS	ircuit		CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$PD6355G KHA220 PD4136B M51955AFP M51945AFP M54546AL	** ** ** RESI:	L TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 751 351 352 604 651 28	EI. WG) EI) Se Circu 536 5. 378 625 7	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSF-201M-SC CSS1030 CSS1027 CSS-042 CCP1005 CCP1005 CCP1006 HCP-267 HCP-275 CPW1007 Part No. RSI/2P220JL RSI/10S102J RSI/10S103J RSI/10S123J
init CC =	Name LLANE IC 35 IC 45 IC 65 IC 65 IC 70 IC 70 IC 70 IC 75 IC	e: CD COUS	ircuit	Symbol & No. ==== Part N	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$PD6355G KHA220 PD4136B M51955AFP M51945AFP M54546AL M5228FP	** ** ** RESI:	L TH TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 352 604 651 28 351 353 381 353 381 354 365 356 357	EI. WG) EI) Se Circu 536 5- 378 625 7: 358 3:	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CSW1096 DSP-201M-SC CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007 Part No. RSI/2P220JL RSI/10S102J RSI/10S102J RSI/10S123J RSI/10S563J
init CC =	Name LLANE IIC 35 IIC 45 IIC 65 IIC 65 IIC 70 IIC 70 IIC 70 IIC 75	COUS	ircuit	Chip Transistor	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L µ PD6355G KHA220 PD4136B M51955AFP M51945AFP M51945AFP M5228FP 2SB822F DTC343TK	** ** ** RESI:	L TH TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651 88 88 88 88 88 88 88 88 88 8	Circu 536 5. 378 625 7. 358 3.	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CSW1096 DSP-201M-SC CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007 Part No. RSI/2P220JL RSI/10S102J RSI/10S102J RSI/10S123J RSI/10S563J
init CC =	Name LLANE IIC 35 IIC 45 IIC 65 IIC 65 IIC 70 IIC 70 IIC 70 IIC 75	COUS	ircuit		CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$PD6355G KHA220 PD4136B M51955AFP M51945AFP M54546AL M5228FP 258822F	** ** ** RESI:	L TH TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 352 604 651 28 351 353 381 353 381 354 365 356 357	Circu 536 5. 378 625 7. 358 3.	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CSY-201M-S0 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007 Part No. RSI/2P220JL RSI/10S102J RSI/10S102J RSI/10S123J RSI/10S563J
nit nit ISCEI ***	Name LLANE LLANE IIC 35 IIC 45 IIC 65 IIC 65 IIC 67 IIC 70 IIC 70 IIC 75	COUS	ircuit	Chip Transistor Chip Transistor	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L \$\mu\$ PD6355G KHA220 PD4136B M51955AFP M51945AFP M51945AFP M5228FP 25B822F DTC343TK UN5210	** ** ** RESI:	L TH TH IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651 88 88 88 88 88 88 88 88 88 8	EI. WG) EI) Se Circu 536 5. 378 625 7: 358 3.	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007 Part No. RSI/2P220JL RSI/10S123J RSI/10S563J RSI/10S564J
init t	Name LLANE LLANE IIC 35 IIC 45 IIC 65 IIC 65 IIC 65 IIC 70 IIC 70 IIC 75	COUS	ircuit	Chip Transistor Chip Transistor Chip Transistor	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L #PD6355G KHA220 PD4136B M51955AFP M51945AFP M54546AL M5228FP 2SB822F DTC343TK UN5210 2SD1819	** ** ** RESI:	L THE IBE IBE IBE IBE IBE IBE IBE IBE IBE IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651 8S 353 353 354 363 355 360 361 360 361 362 360 361 362 360 361 362 360 361 362 360 361 362 363 363 364 365 365 365 365 365 365 365 365	EI. WG) EI) Se Circu 536 5. 378 625 7: 358 3:	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 CWW1096 CSS1030 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPV1007 Part No. RS1/2P220JL RS1/10S102J RS1/10S113J RS1/10S563J RS1/10S164J RS1/10S164J RS1/10S164J
nit nit ISCEI ark =	Name LLANE LLANE 10 35 10 45 10 60 10 65 10 65 10 70 10 70 10 75 10	COUS	ircuit 52(WG)	Chip Transistor Chip Transistor Chip Transistor Chip Transistor	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L #PD6355G KHA220 PD4136B M51955AFP M51945AFP M54546AL M5228FP 2SB822F DTC343TK UN5210 2SD1819 2SC3295	** ** ** RESI:	L THE IBB IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651 8S 351 353 381 353 381 353 381 354 363 364 365 366 377	EI. WG) EI) Se Circu 536 5. 378 625 7: 358 3:	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1027 CSS-042 CCP1005 CCP1006 HCP-267 HCP-275 CPW1007 Part No. RS1/2P220JL RS1/10S102J RS1/10S102J RS1/10S563J RS1/10S563J RS1/10S564J RS1/10S562J RS1/10S562J
init t ci	Name LLANE IC 35 IC 45 IC 45 IC 65 IC 65 IC 70 IC 70 IC 75 IC 75 IC 75 IC 75 IC 35 IC 45 IC 45 IC 50 IC	e: CD COUS	52(WG) 55(WG)	Chip Transistor Chip Transistor Chip Transistor Chip Transistor Chip Transistor Chip Transistor	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L #PD6355G KHA220 PD4136B M51955AFP M51945AFP M54546AL M5228FP 2SB822F DTC343TK UN5210 2SD1819	** ** ** RESI:	L THE IBB IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651 85 353 381 354 365 366 367 360 361 362 364 365 364 365 364 365 364 365 364 365 364 365 364 365 366 367 367 367 367 367 367 367	EI. WG) EI) Se Circu 536 5. 378 625 7: 358 3:	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 CSF-201M-S0 CSS1030 CSS1027 CSS-042 CCP1005 CCP1005 CCP1005 CCP1007 Part No. RSI/2P220JL RSI/10S102J RSI/10S102J RSI/10S113J
inii I	Name LLANE IC 35 IC 45 IC 65 IC 65 IC 65 IC 70 IC 70 IC 70 IC 75 IC 75 IC 75 IC 75 IC 85	COUS	52(WG) 55(WG)	Chip Transistor Chip Transistor Chip Transistor Chip Transistor	CXA1081M M5218FP KHA215 LC7218M CXA1082AQ PA3023 M5218FP M5233FP CXD1135Q CXK5816M-15L #PD6355G KHA220 PD4136B M51955AFP M51945AFP M54546AL M5228FP 2SB822F DTC343TK UN5210 2SD1819 2SC3295	** ** ** RESI:	L THE IBB IB	501 651 351 751 851 (UC) 851 (EW) 852 501 (EW) 501 701 751 351 352 604 651 8S 351 353 381 353 381 353 381 354 363 364 365 366 377	EI. WG) EI) Se Circu 536 5. 378 625 7: 358 3:	it S:	ixed	Ferri-li Choke Co Thermis Thermis Surge Pi Crystal Crystal Ceramic Ceramic Semi-fi: Semi-fi: Buzzer	rotector Resona Oscill B) ×1, 1 xed, 47k xed, 47k	or ator ator (0kΩ (B) (Ω (B) × (ckΩ (B) (ckΩ (B) (ckΩ (B))×2 <4	CTH1035 CCX1001 CCX-021 CWW1097 CWW1096 CWW1096 DSP-201M-S0 CSS1027 CSS-042 CCP1005 CCP1005 HCP-267 HCP-275 CPW1007 Part No. RS1/2P220JL RS1/10S102J RS1/10S123J RS1/10S563J RS1/10S564J RS1/10S564J RS1/10S562J

Mark		Circuit	Symbol &	i No.	==== Part N:	ame Part No.	Mark	***		Circuit	t S)	y∎bol	& No.	****	Part	Name	Part No.
	R 379 515	525 710	711			RS1/10S472J		R	728 778								RS1/10S0R0J
	R 380 617	628 682				RS1/10S203J		R	753 754 762	756 779	9	:					RS1/10S681J
	R 382					RS1/10S363J		R	762			8					RS1/10S391J
	R 383					RS1/10S823J			766 767								RS1/10S681J
	R 384 630					RS1/10S273J		R	770 771								RS1/10S222J
	R 451 452					RS1/10S562J		R	781								RS1/10S303J
	R 453 454					RS1/10S433J		R	782 856 (UC)								RS1/10S154J
	R 455 456		527 529	537 67	73 865	RS1/10S473J		R	856 (UC)	868 (UC))						RS1/10S0R0J
	R 457(WG)					RS1/10S103J		R	856 (EW.	EI. WG)							RS1/10S101J
	R 458(WG)	459(WG)				RS1/10S104J		K	857 858	866							RS1/10S102J
	R 460 461					RS1/10S223J			867 (UC)	889 (UC))						RS1/10SOROJ
					30 532	RS1/10S222J			883								RS1/10S204J
	R 506 533		619 627	773 77	74	RS1/10S104J		R	890 891	892 893	3						RS1/10S6R8J
	R 511(EW.					RS1/10S561J											
	R 512(EW.	EI. WG)				RS1/10S332J	CAPAC	IT	ORS								
	R 513 517	526 528	531 775			RS1/10S103J	Mark	231	*28***	Circuit	t Sy	mbol	& No.		Part	Name	Part No.
	R 514					RS1/10S122J		-									
	R 516 524 R 518 667		212			RS1/10S474J			351								CEA101M6R3LS
	R 518 667		111			RS1/10S472J			352 611		66	2 554	713	724 72	7 751		
	v 213 053	•				RS1/10S153J			353 613								CKSYB333K25
	R 520					RS1/10S393J			354 357 355 667								CASA330M6R3
	R 522					RS1/105221J		•	300 001	000 (14	•						CKSQYB103K50
	R 534 535	538 714	724 725	726 72	27 787	RS1/10SOROJ		С	356								CKSYB332K50
	R 541 (WG)					RS1/10S221J		C	356 359 614								CEAR4TM50LS
	R 542(UC)					RS1/10S392J			360 361								CSZS010M16
								C	370 703	704							CCSQCH220J50
	R 601 602					RS1/10S101J		C	371 512	615							CKSQYB102K50
	R 606					RS1/10S224J											
	R 607 764					RS1/10S683J			372								CCSQCH100D50
	R 608					RS1/10S823J			373 627								CCSQCH220J50
	R 611					RS1/10S432J			451 452								CEA4R7M16LS
	R 612					RS1/10S623J			453 454								CEA4RTM50LS
	R 613					RS1/103624J		C	455 456	6UZ 653	3 70	18 709					CEA100M25LS
	R 616					RS1/10S183J		c	457 458	520 855	. 85	K 257	252				CEA101M10LS
	R 620					RS1/10S332J			459	720 000	, 00	0 001	030				CEA470M16LS
	R 621					RS1/10S184J			460 518	519 606							ŒA220M16LS
						•			461 462								CSQCH330J50
1	R 622 670	687 696	697 715	718 71	19 751 752	RS1/10S103J			501 502								CSQCH270J50
	R 623 765					RS1/10S473J											
	R 624 882					RS1/10S393J			503 510	511 513	3						XSQYF473Z50
	R 631					RS1/10S272J		С	505								CSQSL561J50
	R 665 790					RS1/10S821J			508 (EW.								CSZSR68M20
,	R 668 679					001 /1000001			509 517	728 729	75	4 758					KSQYB103K50
	R 672					RS1/10S392J RS1/10S364J		C	514								CKSQYF104Z25
	R 674 716					RS1/10S364J RS1/10S332J		^	516 621								ID A 4D TU1 SURE
	R 676 677					RS1/10S201J			521 (WG)								EA4R7M16NPLL
	R 678					RS1/10S223J			522 (WG)								CEA220M10LS
						M41/ 1805544			601								CK SQYB222K50
1	R 680					RS1P1R5JL			603 607	612 716	5						EA100M6R3LS
	R 681					RS1/10S203J											
	R 683					RS1/10S101J		C	605 620	622 628	8 62	9					KSYB473K25
1	R 685 692					RS1/10S105J		C	608								EA220M6R3NPLL
									609 756								KSQYB472K50
:	R 690					RS1/10S272J			610 619								CSQCH221J50
		900 000						¢	616								EA220M6R3LS
	R 691 703					RS1/10S103J		_									
	R 694 786					RS1/10S822J			618								X SQYB682K50
	R 701 R 712 713					RS1/10S100J			623								K SQYB272K50
	R 721					RS1/10S392J RS1/10S4R7J			624								CSQCH391J50
						ROL/IVOGE!J			651 670 652			49	0	ICT			K SYF224Z25
								•	932			4.1	0 μ F/	104			IC到-114

Mark ==		=	Circuit	Symbol & i	No. ====	Part Name	Part No.	Unit												
c	654 6	58					CCSQCH221J50	Unit	N	ane	: 1	Disp	lay	Unit						
	656						CEA100M16LS	MISC	ELL	ANEOU	JS (U(C. EW)							
C	661 6	63					CEA010M50NPLL													
	665 6		852				CKSYB473K25	Mark	==:		EEE	Cir	cuit	Symb	ol & N	o. :	-===	Part	Name	Part No.
С	671 6	72					CSZSR68M20						_							
C	674 7	05					CASA100M6R3			901 902										PD4194
	675 6						CEA2R2M35LS			901										NJM2903M
	677 6		680				CCSQSL681J50			902					Chip	Trans	sisto	г		2SB822F UN5210
C	681						CKSYB393K25				904	905	906	907	Chip	Tran:	sisto	r		DTC124TU
С	701 7	10	712 726				CASA6R8M6R3													
_										901					Chip	Diode	•			MA141WA
	702						CASA220M6R3								Chip					MA141A
	706 7 717 7						CCSQCH470J50					903	(EM)							MAI 41 WA
	722 7						CEA470M6R3LS CEA330M6R3LS			904					Chip		8			MAI41A
	752 7						CCSQCH300J50	•	U	303					LEV					LN260 RCPX0
							***************************************	*	D	906	907				Chip	Diode				MAL41X
C	755						CEA101M6R3LS			908					Chip	LED				CLS5UR/YOROA
	757						CASA6R8M10	*	D	910	911	912	313	914	915 91	5 917	918	Chip	LED	CL51YCD680A
	851 (E	-	1. WG)				CKSYB473K25								928 92		933	Chip	LED	CL51YCD680A
	853 8	54					CEA3R3M50LS	*	D	923	924	926	927	930	932 LE	0				LN460 YCPX
L	859		•				CEA220M6R3LS		,	001					To do a					
С	861 8	62					CEA3R3M25LS			901					Induc					LAU15 OK
•		•					ODN OR OWE OF O	**					904	905			909	910	Switch	CCL10 12 CSG-2 55
								**	S	911	912	913	914	915	916 91	7 918	919	920	Switch	CSG-255
								**	S	921	922	923	924	925	Switch	h	-			CSG-2 55
								**		901					Lamp,					CE_1089
									Ä	901					Cryst		esona	tor		CS\$10 23
															LCD (E					CWY11 61 CWY12 03
															DOD (D	,				0411203
								MISC	ELL	ANEOU	JS (E	()								
								Mark	==:			Circ	cui t	Symbo	ol & No). =	===]	Part	Name	Part No.
								**	10	901										PD(194
										902										NJ129 O3M
								**	Q	106										2Si82 2F
										902					Chip 1	rans	isto	г		UN 21 O
								**	Q	903	904	905	906	907	Chip 1	rans	isto	Г		DT(124TU
									D	901	902	903			Chip I	iode				MAI41 WA
										904					Chip I					MAIALA
								*	D	905					LED					LNIGO IRCPXO
										906					Chip I		•			MAI41 IK
								*	D	908	909				Chip I	.ED				CLISUR/PGOROA
									D	910	911	912	913	G14 ·	915 916	917	918	Chin	1 PD	CLIPGCD680A
															928 929					CLIP GCD680A
									D	923	924	926	927	930	932 LEI)				LNISO GCPXG
									L	901					Induct	or				LAIS OF
								**	S	901	902	903	904	905	906 901	908	909	910	Switch	CSI-2 55
								**			010	01.5								
															916 917 Switch		919	920	Switch	CSI-2 55
										901		343	364	343	Lamp, 8		- 4			CSI-2 55 CEI10 88
										901					Crysta			tor		CS110 23
															LCD					CW11 62

MISCELLANEOUS (WG)

Mark	223	****	==	Circ	uit	Symb	ol &	No.	==	== P	art	Name	Part No.	
**	IC	901											PD4195	•
**	IC	902											NJM2903M	
**	Q	901											2SB822F	
**	Q	902					Chi	ip Tı	ransi	isto	r		UN5210	
**	Q	903	904	905	906	907	Ch	ip T	rans	isto	r		DTC124TU	
*	D	901	902	903	904		Ch	ip D	iode				MA141A	
*	D	905					LEI	0					LN260RCPXO	
*	D	906	907				Ch	ip D	iode				LN260RCPXO MA141K CL55UR/YORG	
*	D	908	909				Ch	ip Li	ED				CL55UR/YOR)
*	D	910	911	912	913	914	915	916	917	918	Chi	LED	CL61YCD680	١
*	D	919	920	921	922	925	928	929	931	933	Chi	LED	CL61YCD680	ł
	D	923	924	926	927	930	932	LED					LN460YCPX	
	L	901					In	duct	or				LN460YCPX LAU150K	
**													CSG-255	
**	S	911	912	913	914	915	916	917	918	919	920	Switch	CSG-255	
**	S	921	922	923	924	925	Sw	itch					CSG-255	
**	IL	901	902				La	mp. 8	V 60	πA			CEL1089	
		901											CSS1023	
													CWW1203	

RESISTORS (UC. EW, E1, WG)

Mark	==:		=	Circ	uit	Synt	ol	& N	0.	===	=	Part	Name	Part No.	
	R	901												RS1/10S2	23 J
	R	902 9	107	918	919	920	92	92	2	925				RS1/10S2	22J
	R	903												RS1/10S4	73 J
	R	904												RS1/10S2	21 J
	R	905												RS1/10S3	61J
	R	906												RS1/10S1	23 J
	R	908 9	24	926										RS1/8S22	2 J
	R	909												RS1/10S2	22 J
	R	910 9	11	912	913	914	94	2						RS1/10S2	04J
	R	915 9	16	917										RS1/10S1	04 J
	R	927 9	28	929	930									RS1/10S1	81J
	R	931 9	32											RS1/8S33	IJ
	Ř	933 9	34											RS1/8S24	1J
	R	935 9	336	938	939									RS1/10S3	31J
	R	937 9	140											RS1/10S4	71J
	R	941												. RS1/10S3	91 J
	R	943 9	944											RS1/10S1	21 J

CAPACITORS (UC, EW, EI, WG)

Mark	===		Circu	ait Sym	bol & l	lo. ====	Part	Name	Part No.
	C	901							CKSQYF104Z25
	C	902 90	5 908						CKSYF334Z25
	¢	903 (EW	. E1, WG))					CCSQCH080D50
	C	904							CCSQCH040C50
	C	906 90	7						CKSQYB103K50

Unit Number : Unit Name : Mechanism P.C.Board

0			
¥	831	Photo Transistor(DISC SENSE)	PH102K
D	831	LED(DISC SENSE)	SLH-34VC3F
M	833	Motor Unit (LOADING)	CXA2129
S	832	Switch (DISC SET)	CSN1009
N	umber:		
N	are :	Carriage P. C. Board	
#8:		Circuit Symbol & No. ==== Part Name	Part No.
M	831	Motor Unit(SPINDLE)	CXM1033
M	832	Motor Unit (CARRIAGE)	CXA2133
S	831	Switch (HOME)	CSN-094
	S N N:	Number : Name :	Number: Name: Carriage P. C. Board ======= Circuit Symbol & No. ==== Part Name M 831 Motor Unit (SPINDLE) M 832 Motor Unit (CARRIAGE)

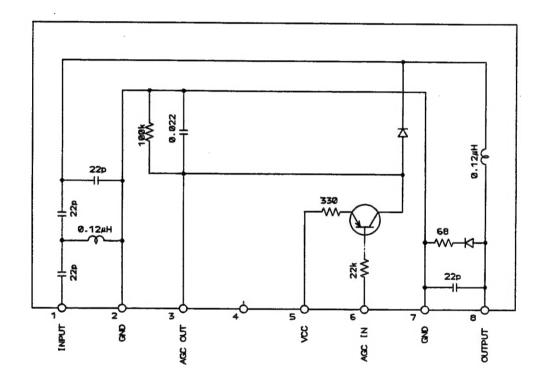
ICs and Transistors

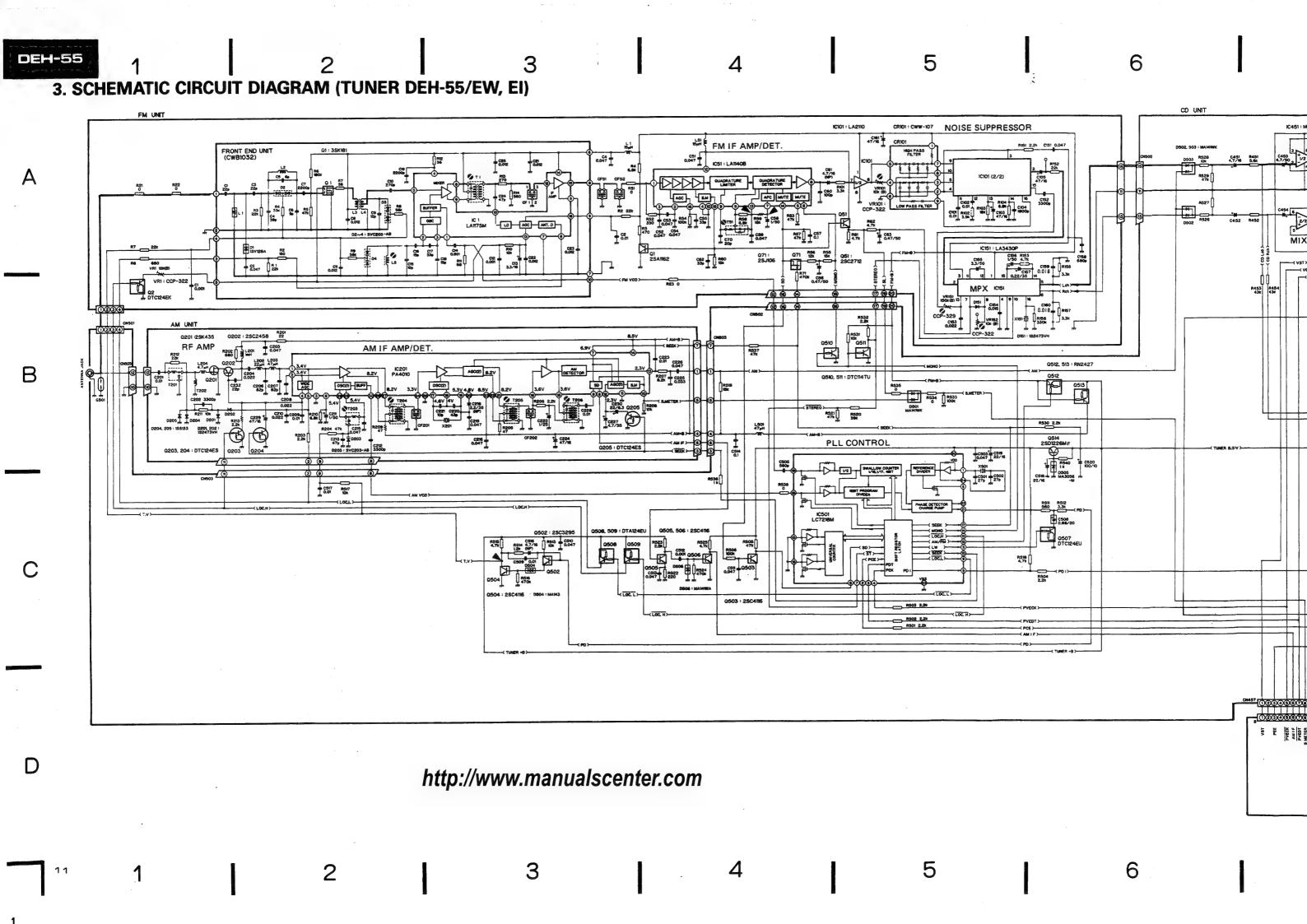
2SD1226MF

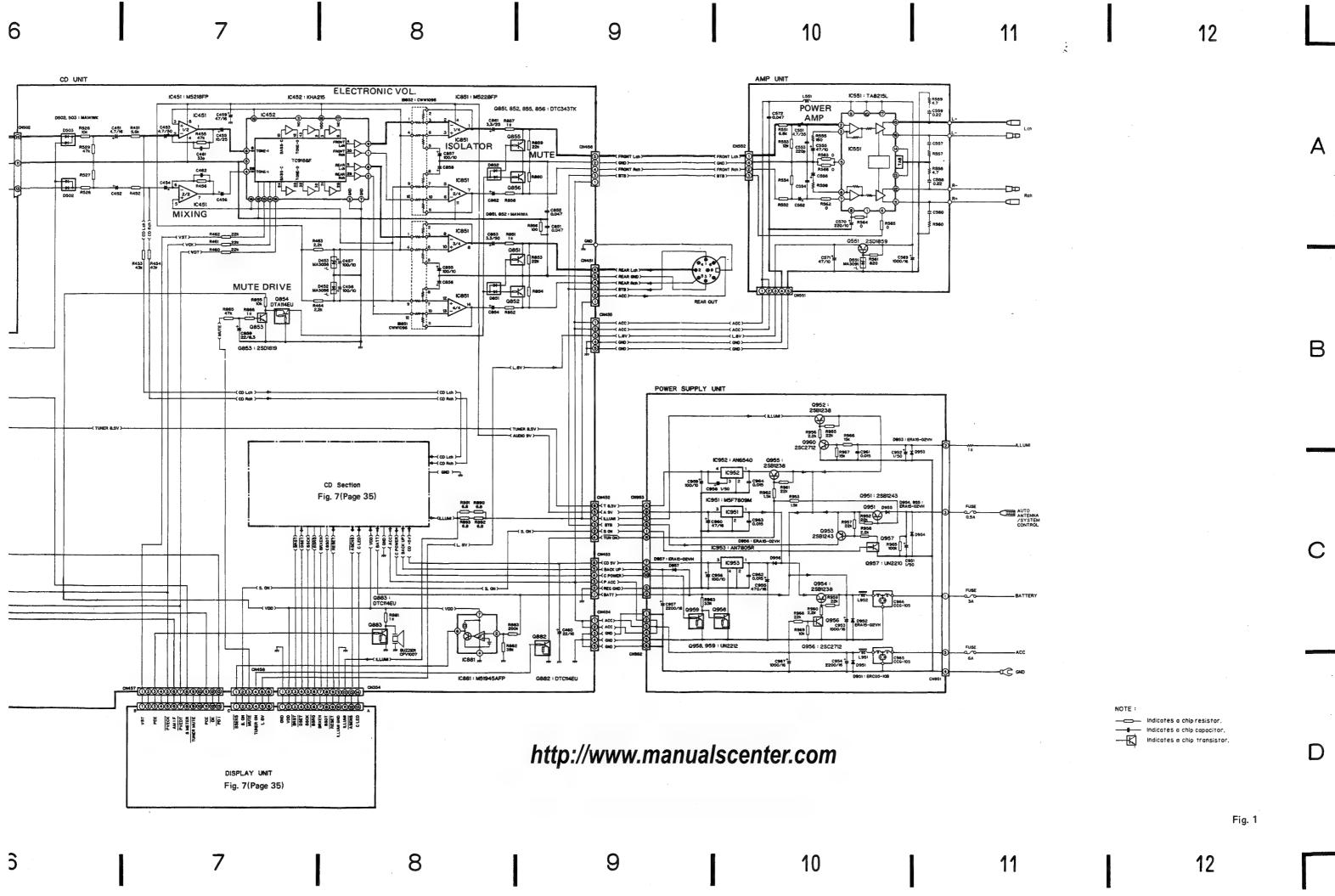


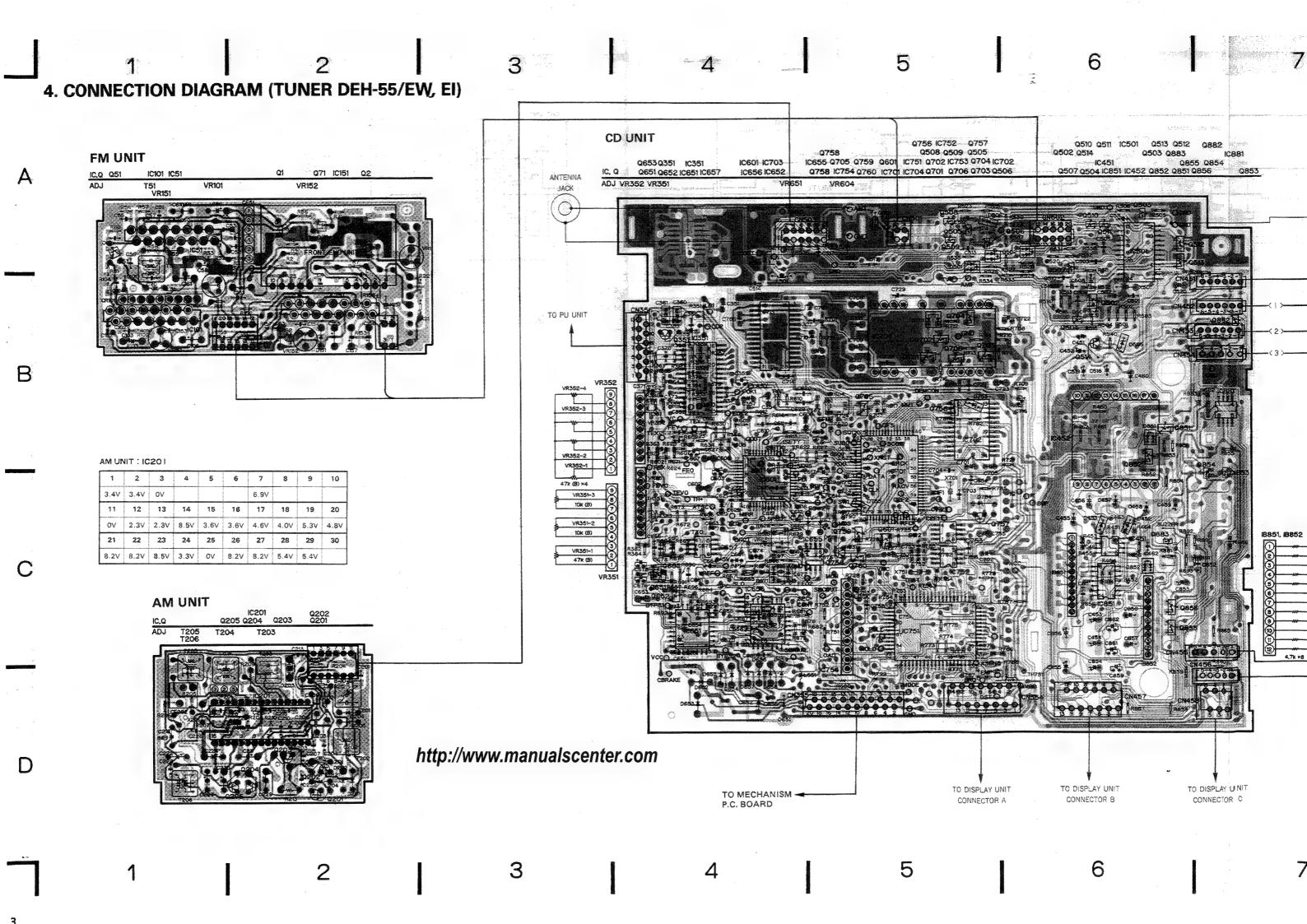
• FM Unit

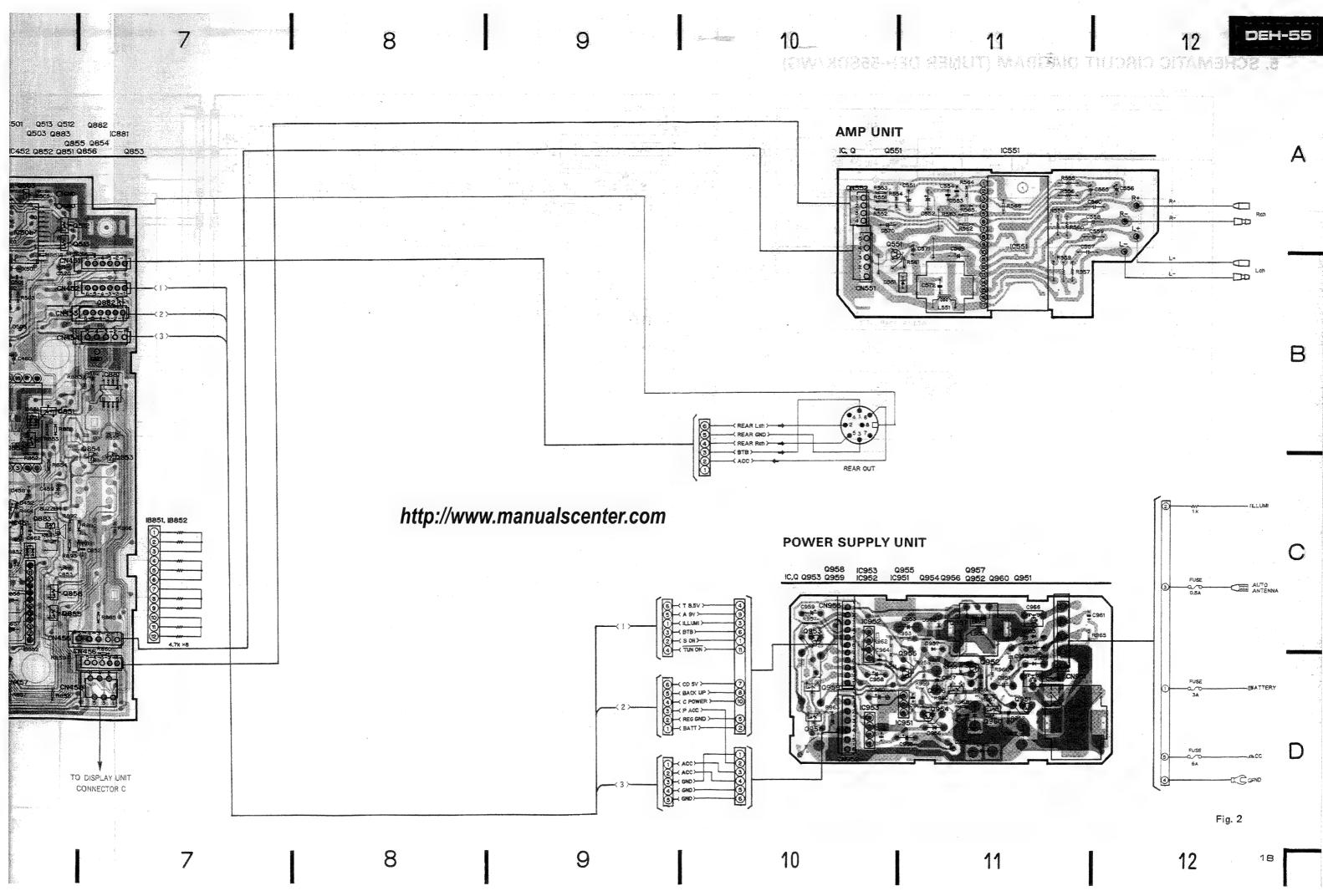
IC1(DEH-55/UC) : CWW1116



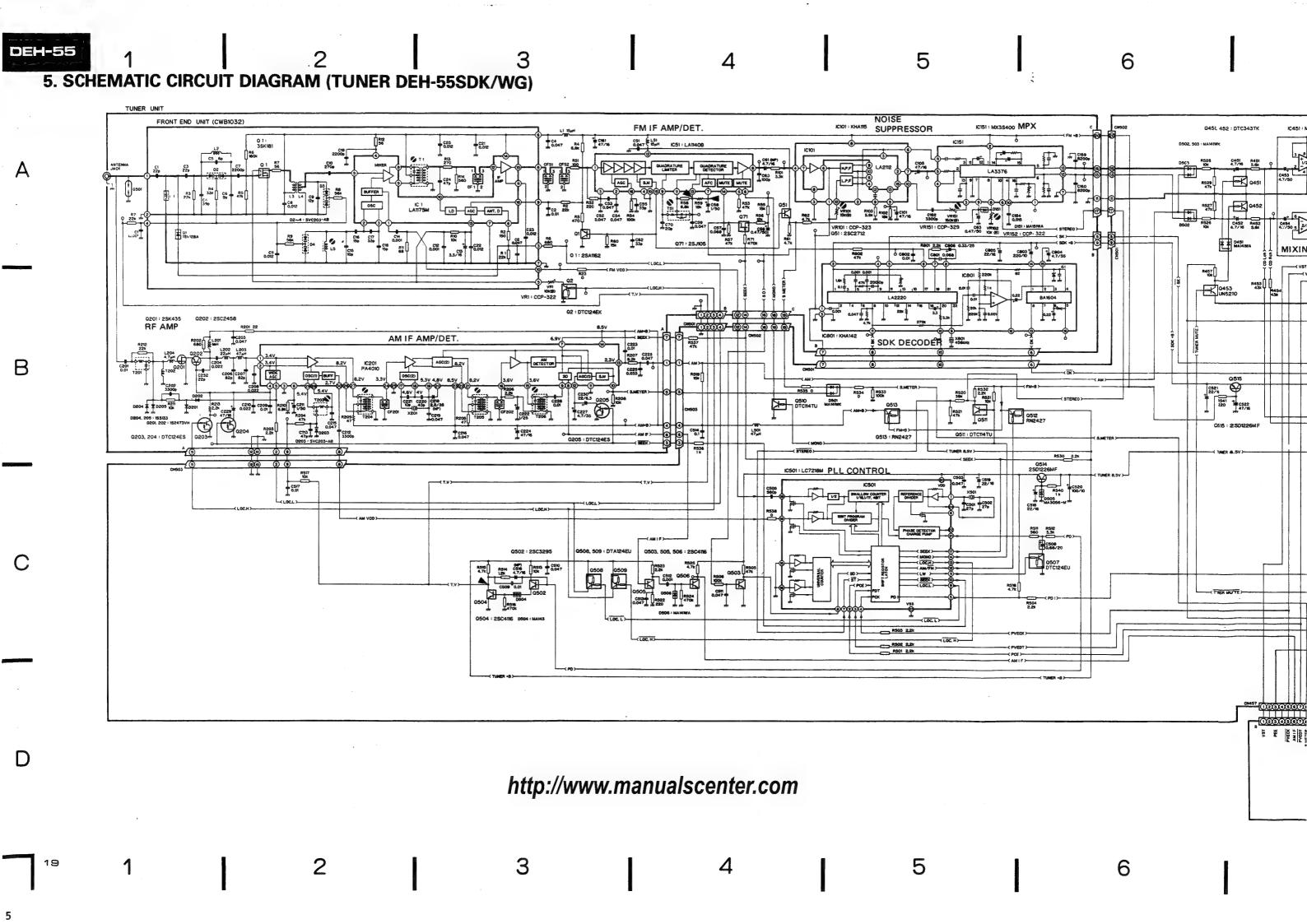


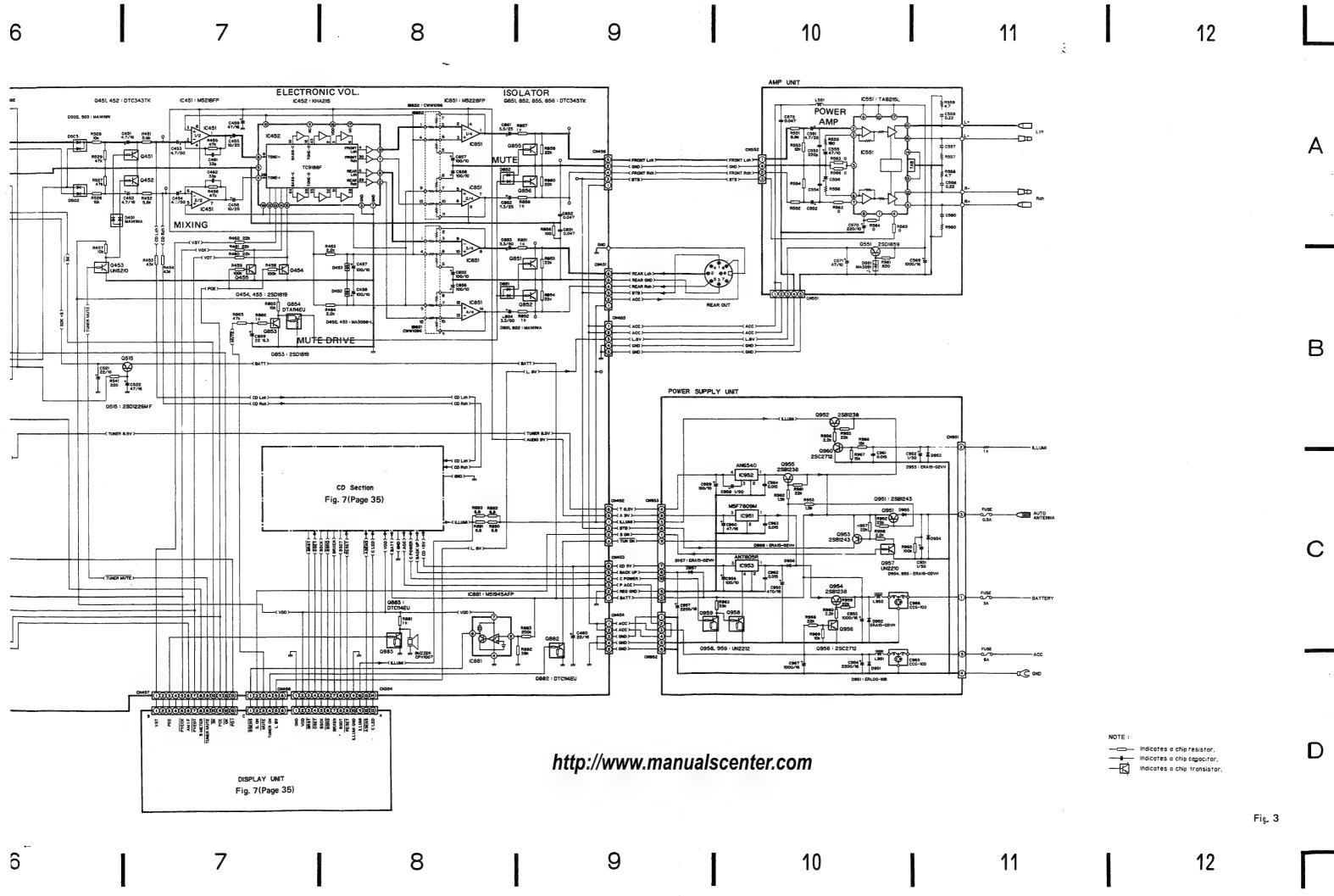


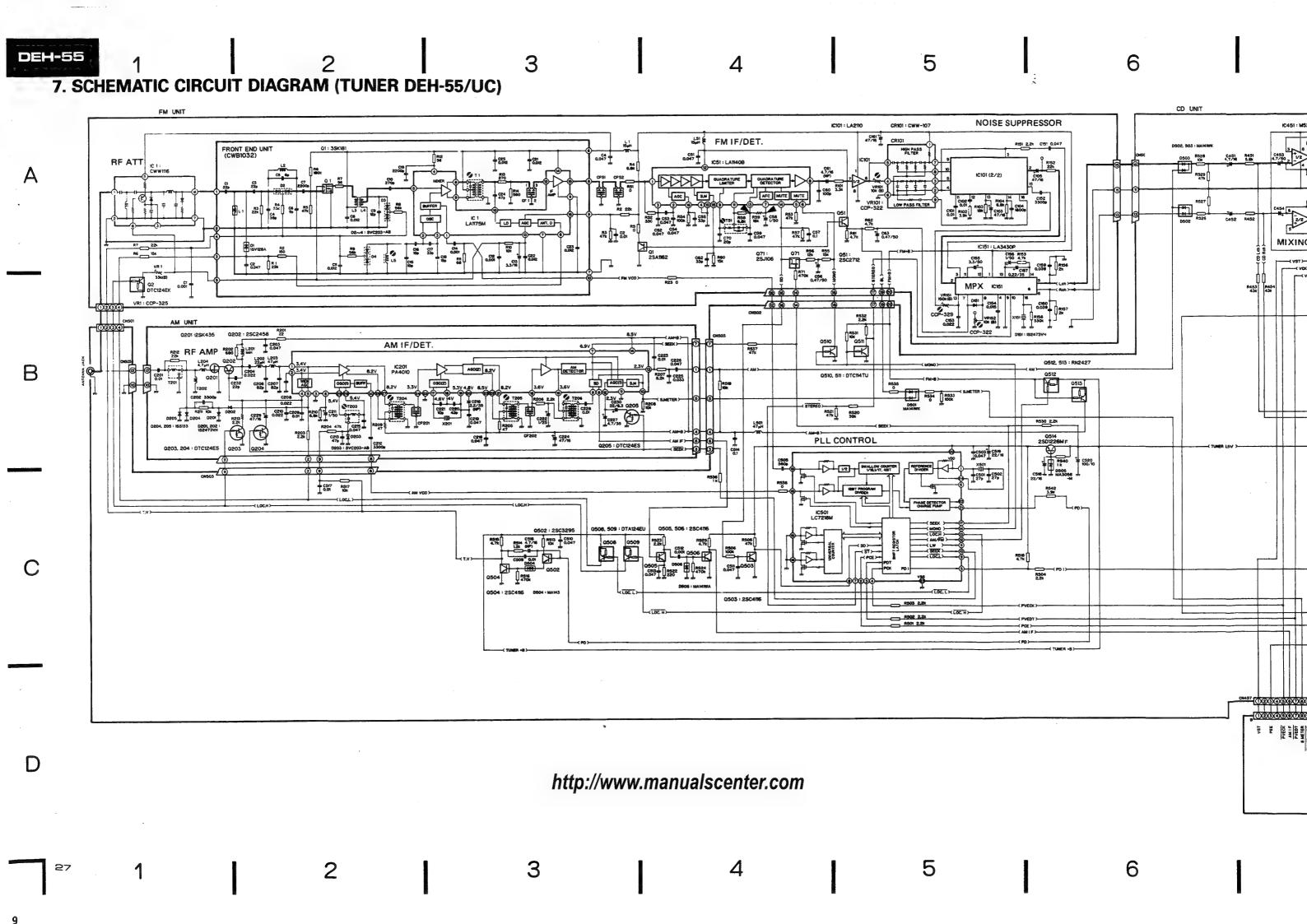


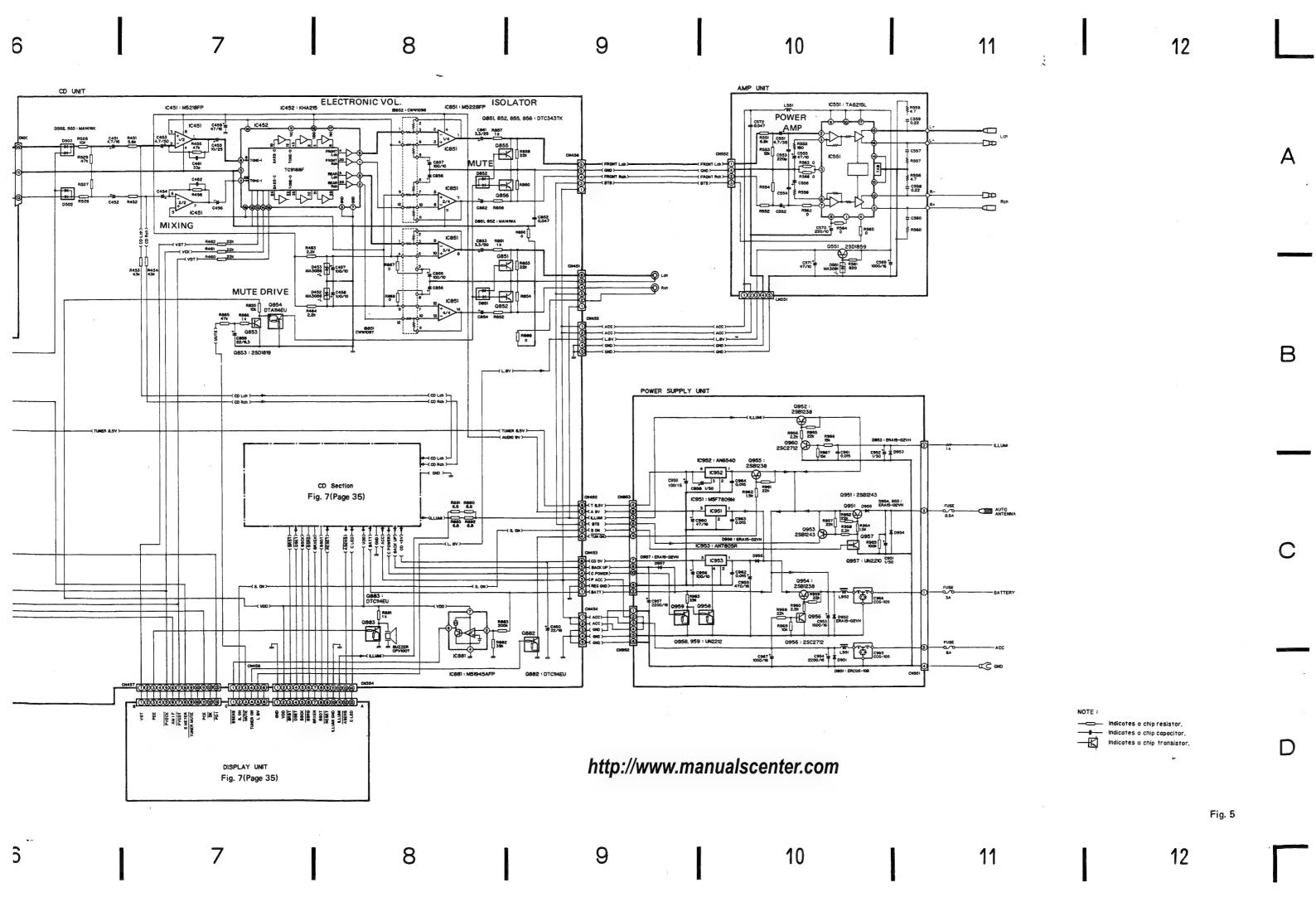


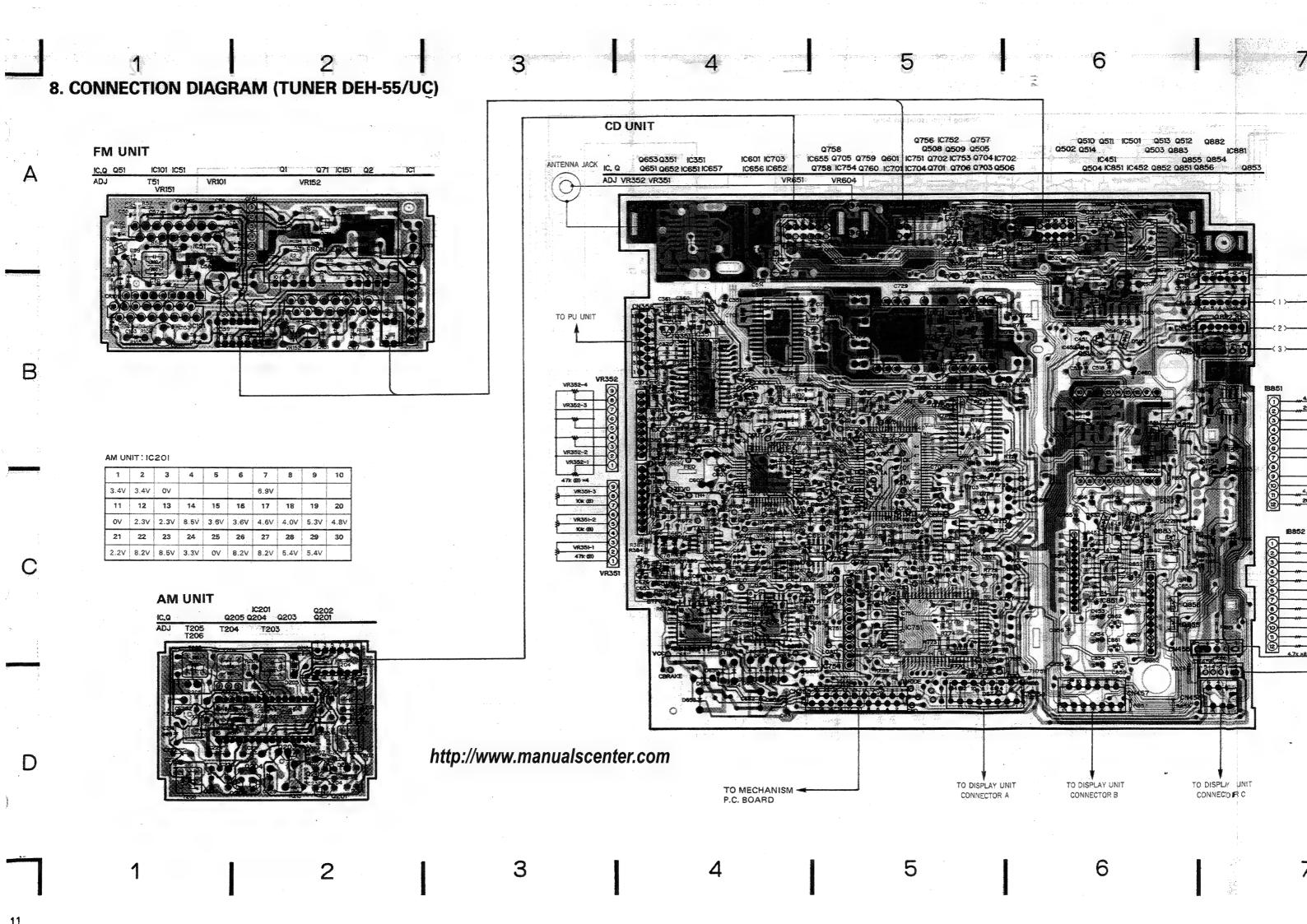
Δ

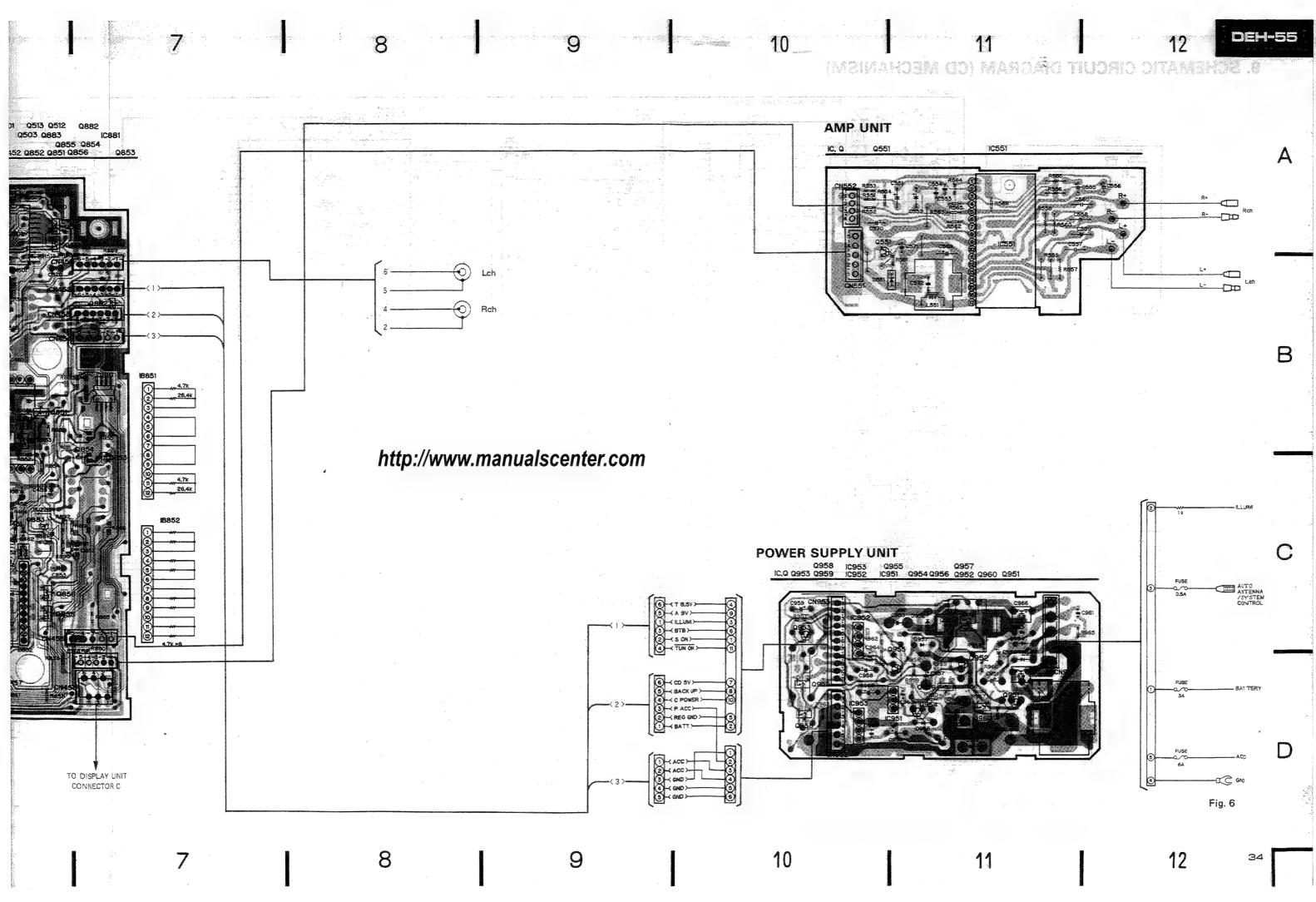


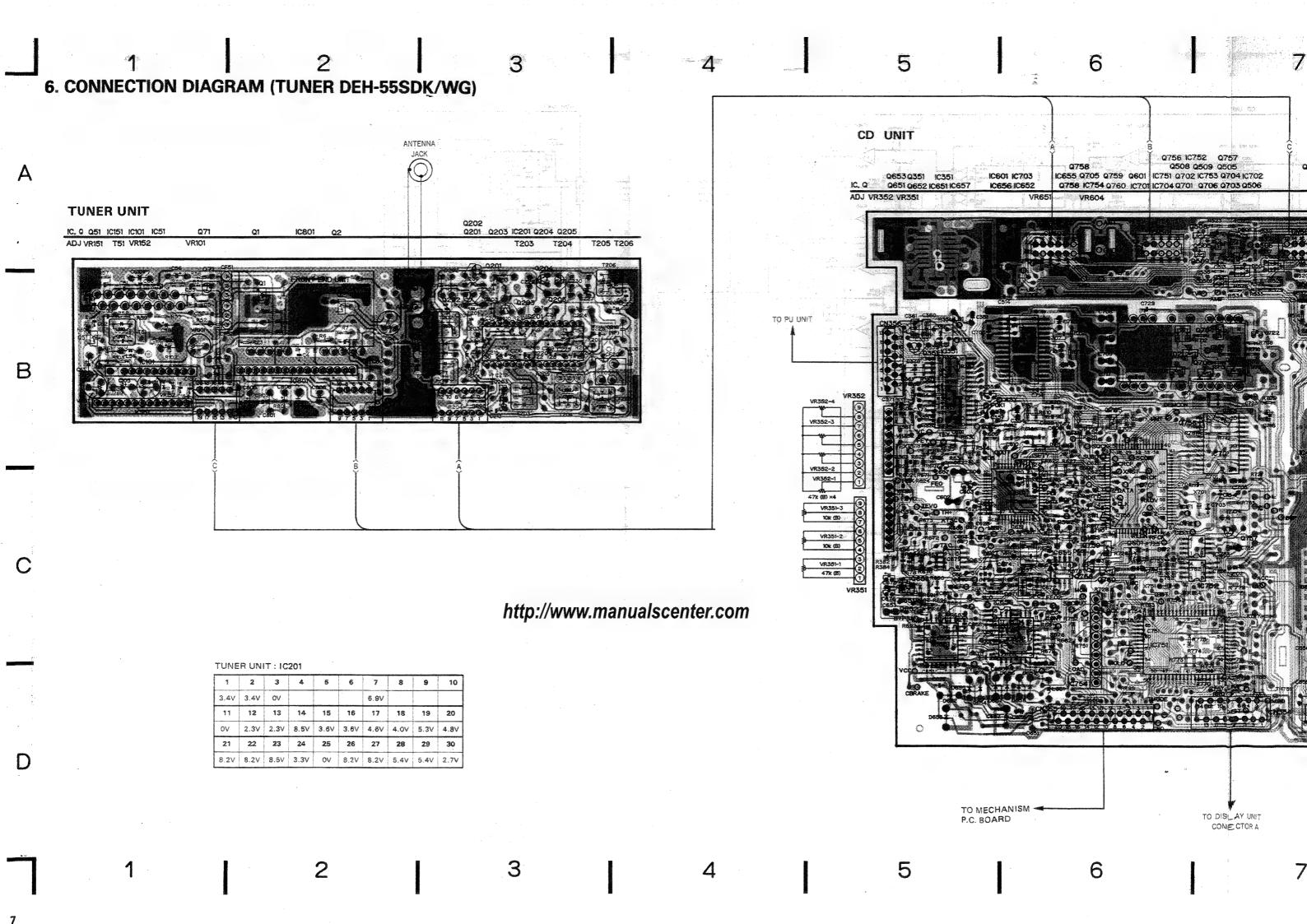


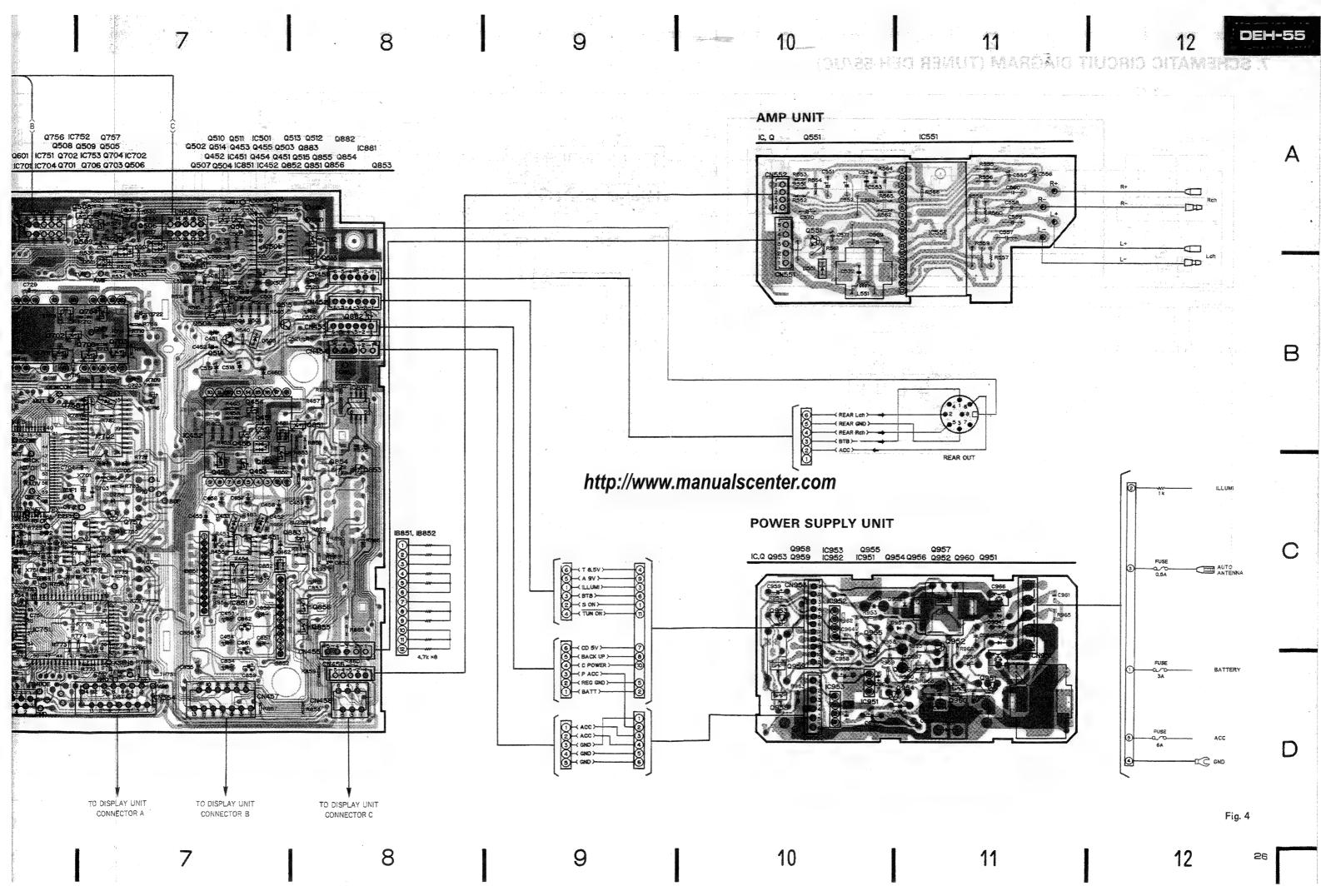


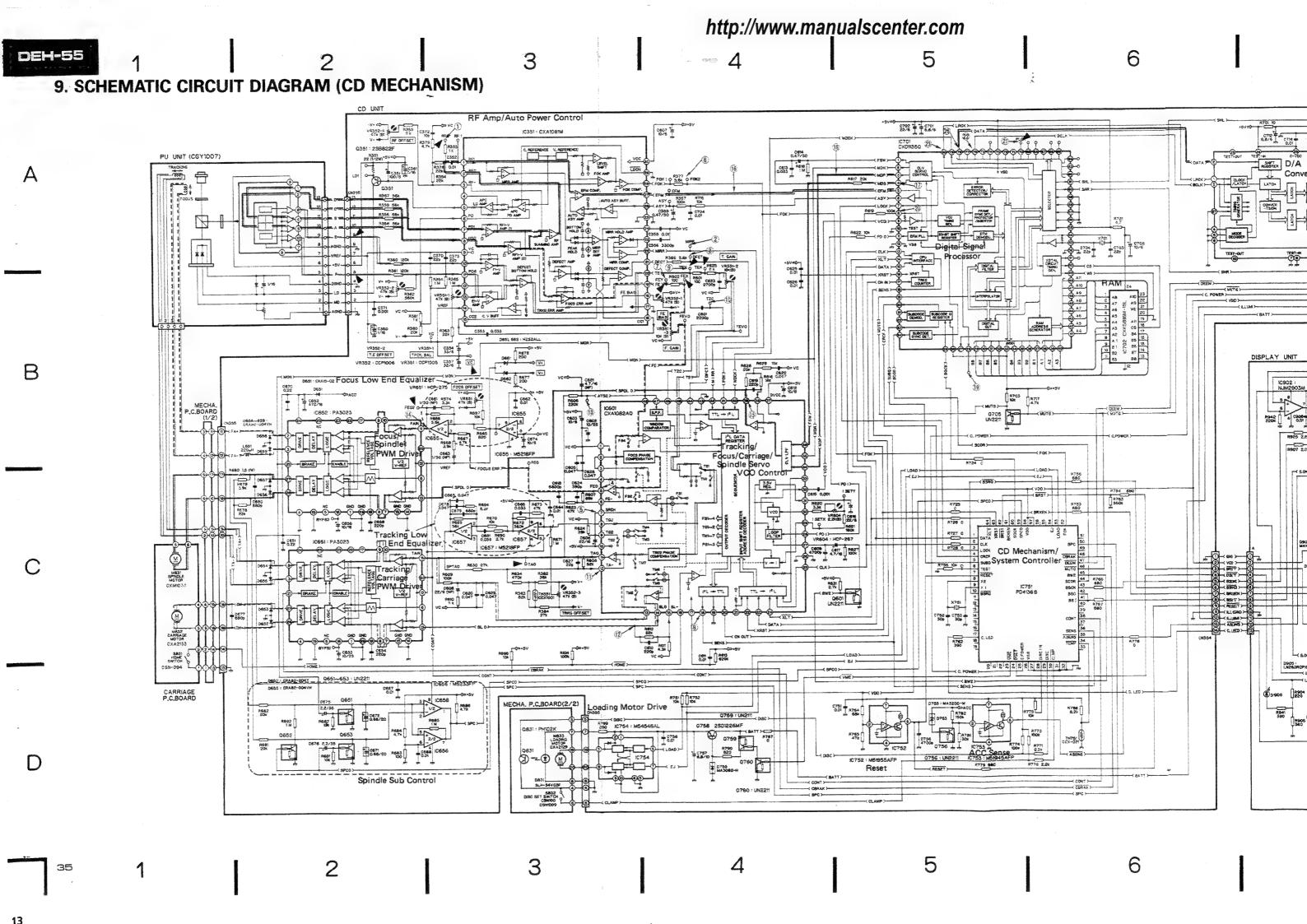


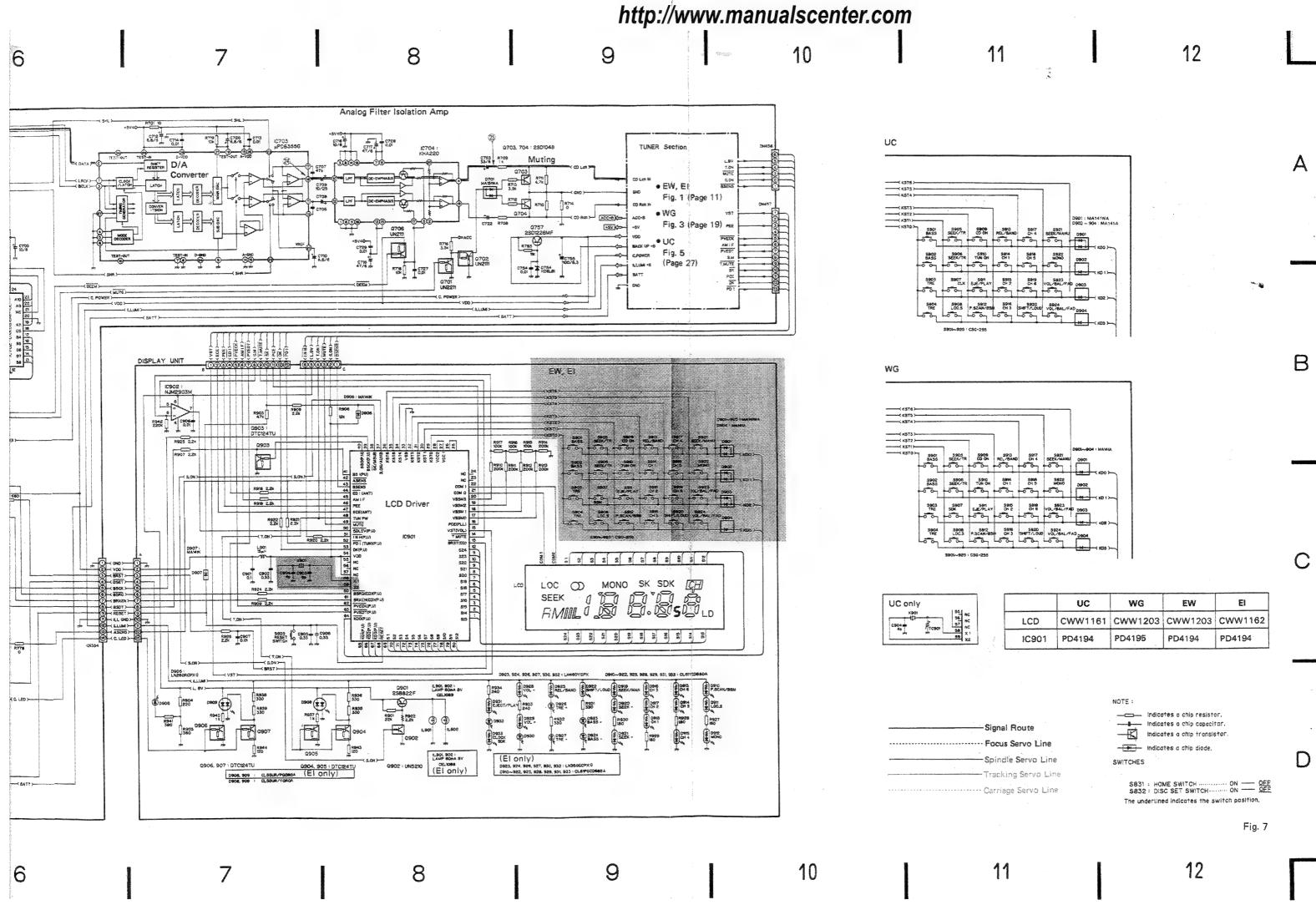




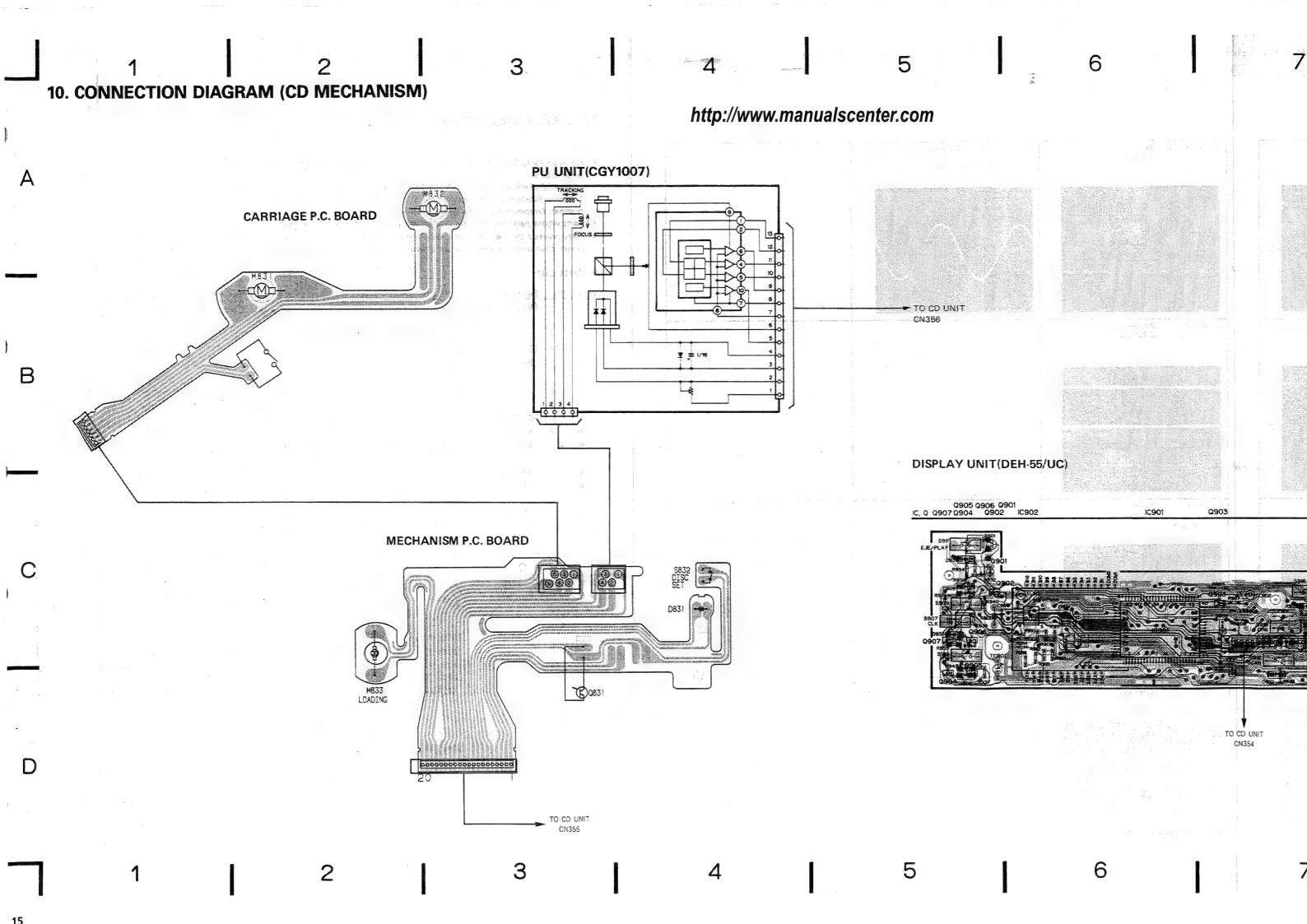


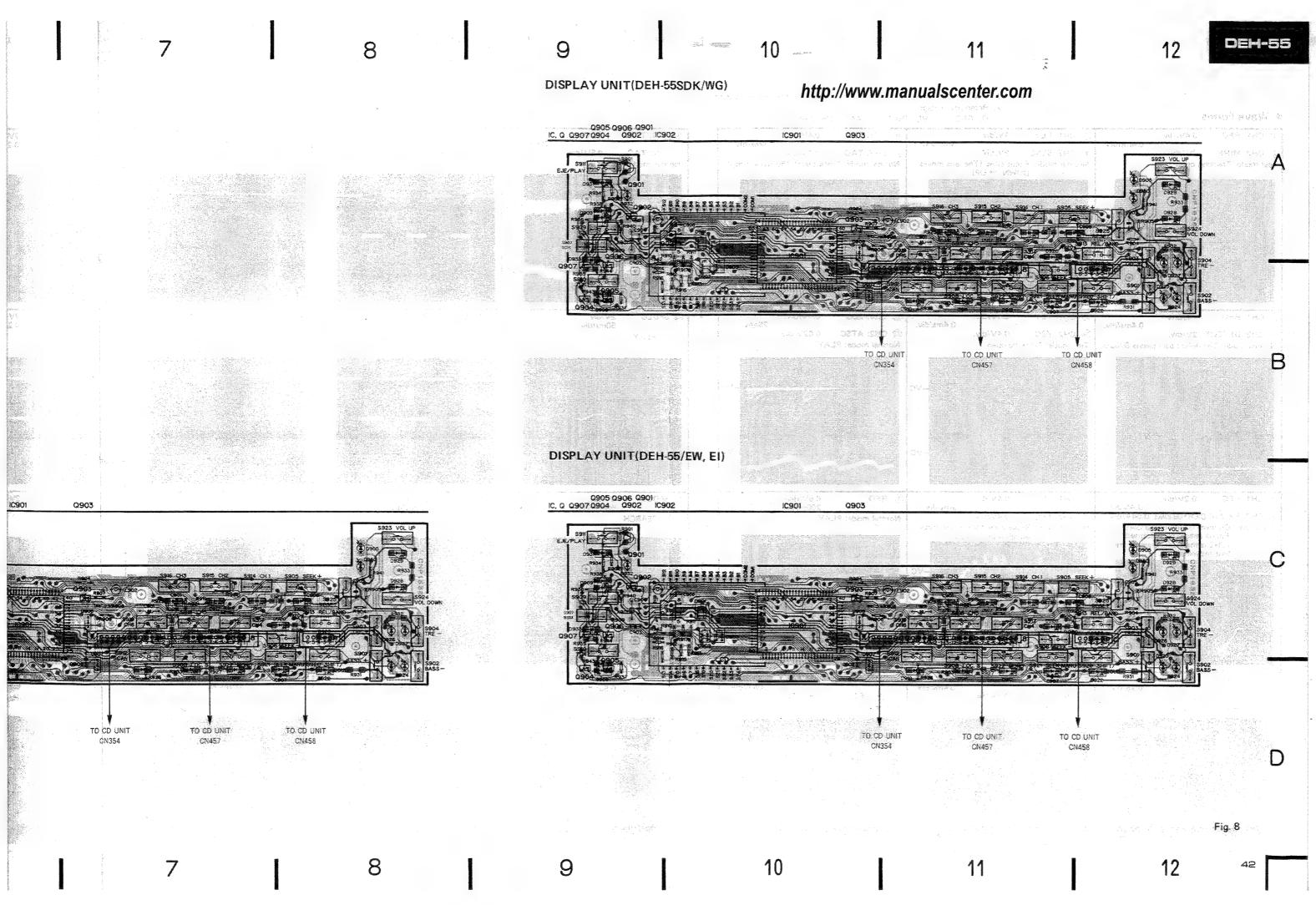






1/1



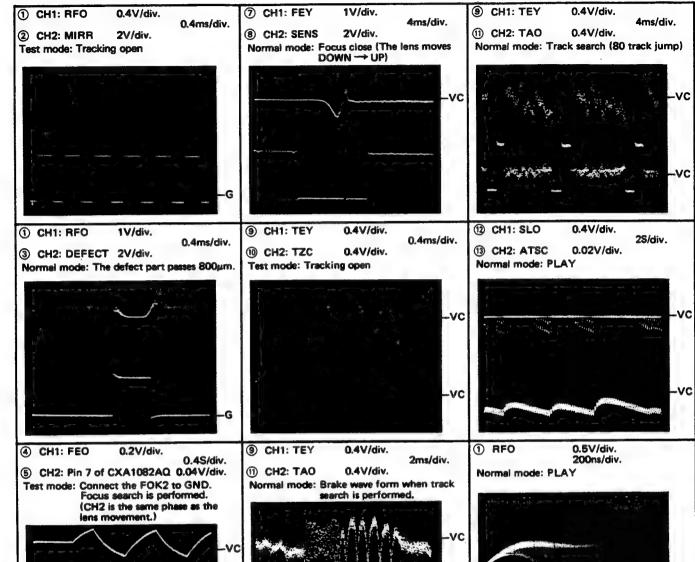


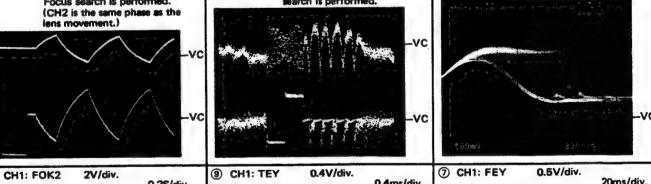
Wave Forms

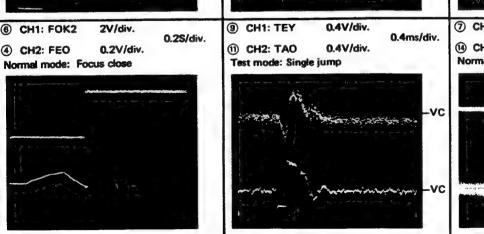
Note: 1. The encircled numbers denote measuring points in the circuit diagram.

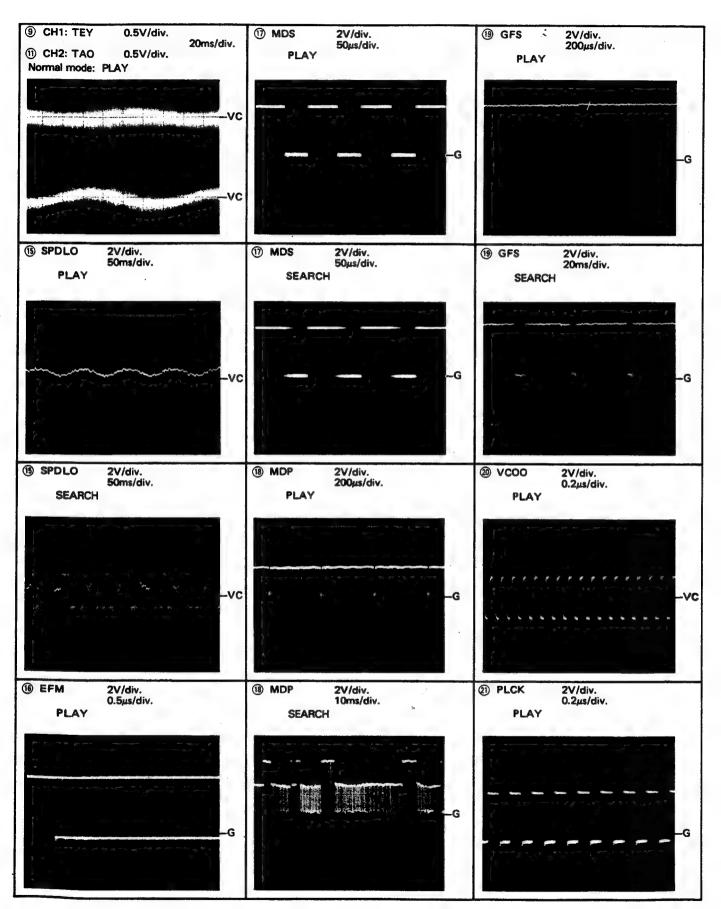
2. Reference voltage.

G: GND VC: Pin 14 of CXA1081M (2.5V)









② BCLK	2V/div. 0.2μs/div.	(B) L or R L.P.F. 0.5V/div. 0.2ms/div. PLAY (1kHz: FS)	÷
3 DATA	2V/div. 0.2μs/div.		
E. Contractor	G. W. A.		
② LRCK PLAY	2V/div. 5μs/div.		
	-G		·
② L or R OUT	0.5V/div. 0.2ms/div. (1kHz: FS)		
		:	

11. EXPLODED VIEW

NOTE:

- For your Parts Stock Control, the fast moving items are indicated with the marks
 ★ ★ and ★.
 - * *: GENERALLY MOVES FASTER THAN *.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

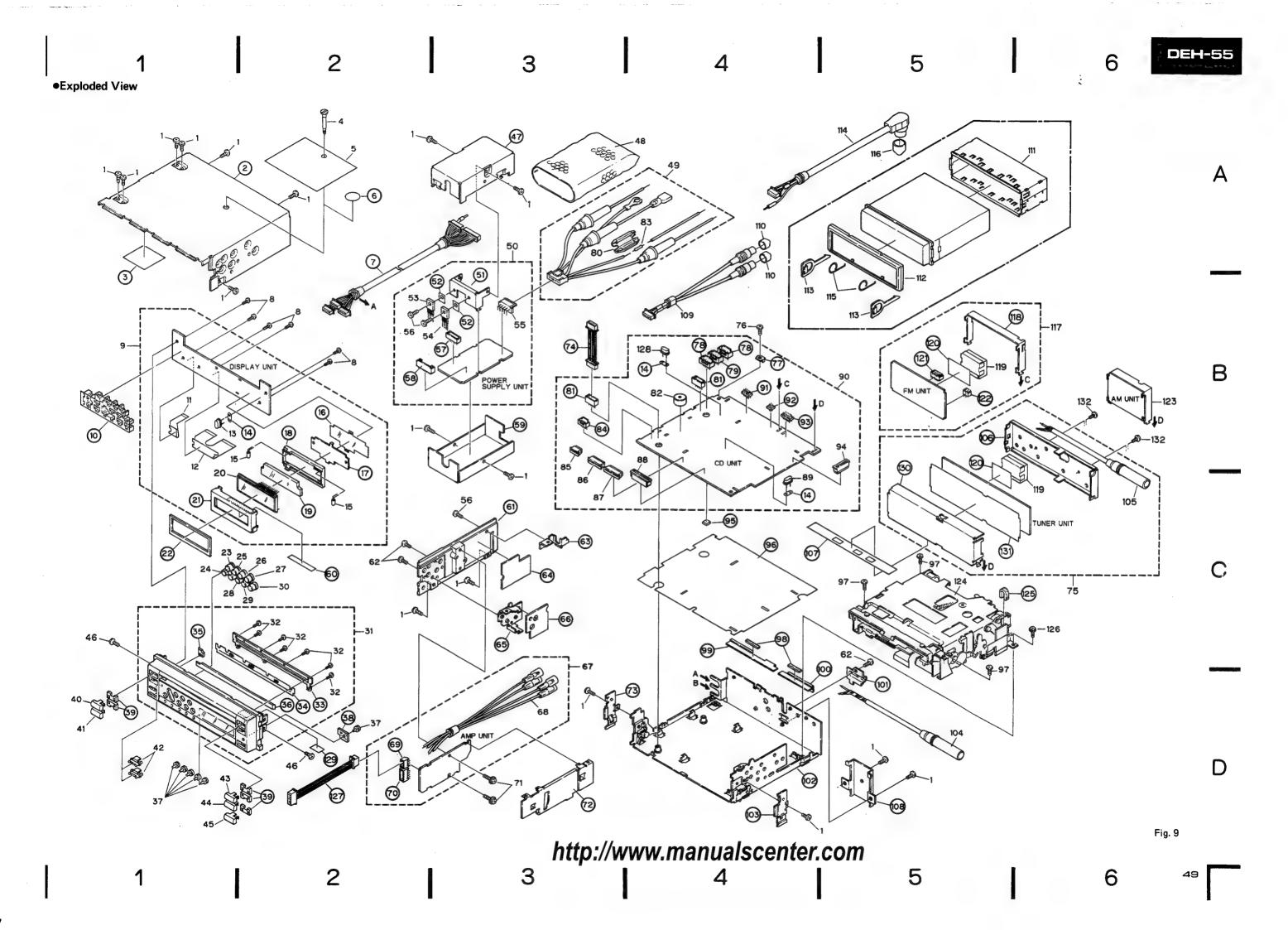
- Parts whose parts numbers are omitted are subject to being not supplied.
- Parts marked by "@" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

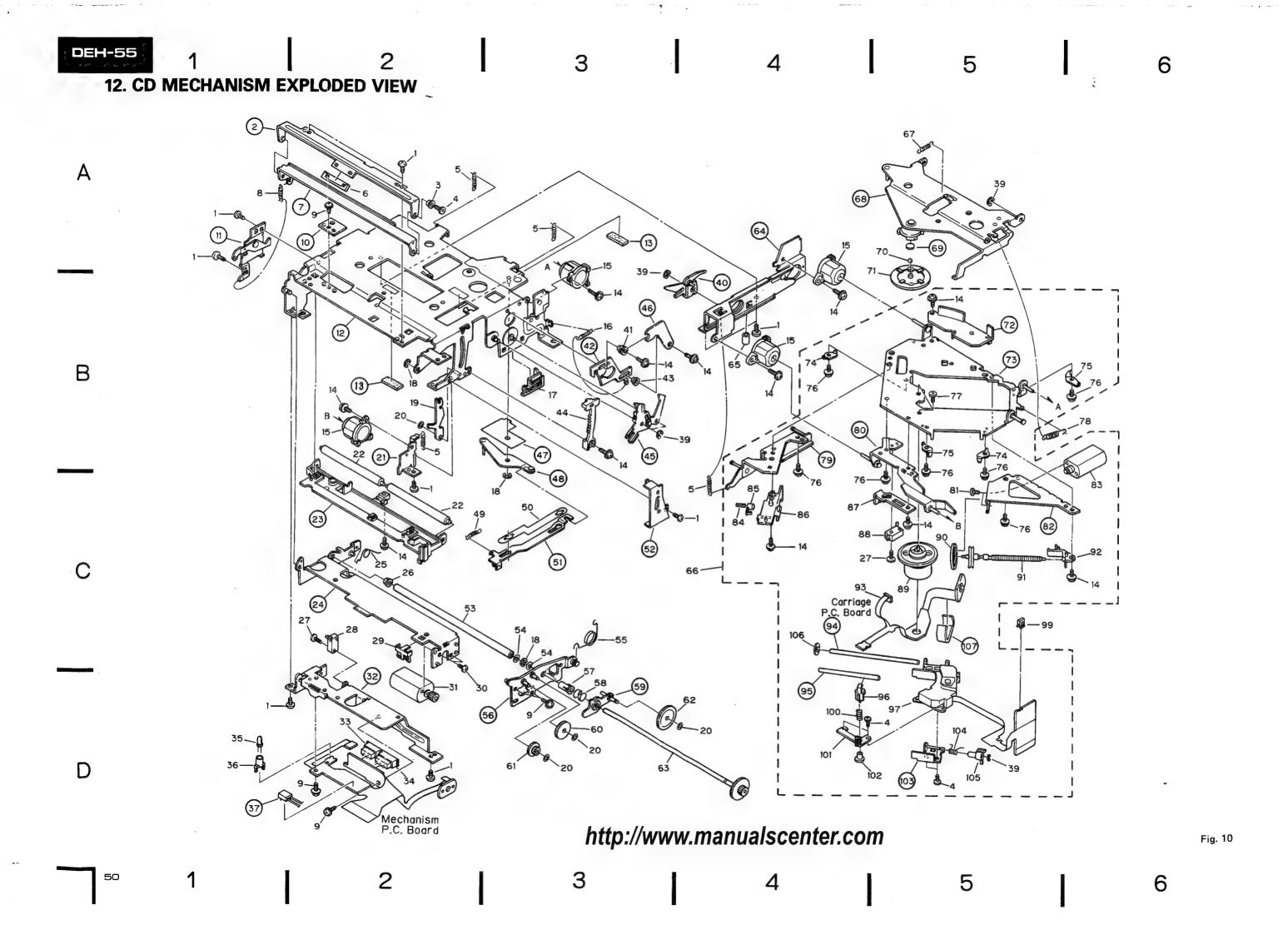
Parts List

Mark	No.		Description			Part No.	Description
	1	BMZ30P050FMC	Screw	*	30	CAC1619	Button
	2		Case		31	CXA2790	Grille Unit(UC)
	3		Insulator			CXA2791	Grille Unit (EW, El)
	4	CBA1094	Transportation Screw			CXA2792	Grille Unit(WG)
	5	CRP1031	Caution Card		32	PVZ14P045FZK	Screw
	6		Seal		33		Holder
	7		Cord		34		Cover
	8	BPZ20P050FMC	Screw		35		Lens
	9	CWX1182	Display Unit(UC)		36		Lens
•		CWX1185	Display Unit(EW)	*	37	CAC1622	Button
•		CWX1186	Display Unit(EI)		38		Cushion
		CWX1189	Display Unit(WG)		39		Cushion
	10		Cushion	*	40	CAC1608	Button
	11	CNP1656	P. C. Board	*	41	CAC1609	Button
	12	CNP1655	P. C. Board	*	42	CAC1613	Button
	13	CSS1023	Crystal	*	43	CAC1610	Button
	14		Insulator	*	44		Button
**	15	CEL1089	Lamp(UC, EW, WG)	*	45	CAC1612	Button
**		CEL1088	Lamp(EI)		46	PMS30P040FMC	Screw
	16		Film		47		Case
	17		Shield Plate		48	CEG1037	Cover
	18		Holder		49		Cord(UC)
	19		Lens			CDE1895	Cord(EW, EI, WG)
	20	CWW1161	LCD (UC)	•	50	CWR1018	Power Supply Unit
		CWW1203	LCD (EW, WG)				(UC)
		CWW1162	LCD(EI)	•		CWR1017	Power Supply Unit
	21		Case				(EW, EI, WG)
	22		Cushion		51		Bracket
*	23	CAC1621	Button		52		Insulator
*	24	CAC1620	Button	**	53	AN7805R	IC
*	25		Button	**			IC
*	26	CAC1615	Button		55		Plug
*	27		Button		56		
*	28		Button		57		Plug
*	29	CAC1618	Button		58		Plug
46		*					

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	59		Case		97	BMZ26P040FMC	Screw
	60		Insulator		98	:	Cushion
	61		Heat Sink		99		Plate
	62	BMZ30P040FMC	Screw		100		Plate
	63		Holder		101		Antenna Holder
	64		Film		102		Chassis Unit(UC)
	65		Holder				Chassis Unit(EW, EI)
	66		Film				Chassis Unit(WG)
•	67	CWH1056	Amp Unit		103		Side Cover
	68	CDE1771	Cord		104	CDH1068	Antenna Cable (UC, EW, EI)
	69		Plug		105	CDH1067	Antenna Cable(WG)
	70		Plug		106		Case(WG)
	71	PMS30P100FMC	Screw		107		Insulator(WG)
	72		Holder		108		Bracket
	73		Side Cover		109	CDE1775	Cord(UC)
	74		Connector		110	CNW-829	Cap(UC)
•	75	CWE1105	Tuner Unit (WG)		111	CNC1484	Holder
	76	BMZ30P040FMC	Screw (UC, EW, EI)		112	CNS1403	Panel
		PMS30P040FMC	Screw(WG)		113	CNC1631	Handle
	77		Holder (UC, EW, EI)		114	CDE1772	Cord(EW, EI, WG)
	78		Plug		115	CBH-865	Spring
	79		Plug		116	CNV1445	Cap(EW, EI, WG)
	80	CNS1472	Cap	•	117	CWE1096	FM Unit (UC)
	81	00114.000	Plug	•		CWE1097	FM Unit (EW, EI)
	82	CPV1007	Buzzer		118		Holder (UC, EW, EI)
	83	RS1/2P102JL	Resistor		119	CWB1032	Front End Unit
	84	0701075	Plug		120	-	Insulator
	85	CKS1075	Connector		121		Connector (UC, EW, EI)
	86	CKS1082	Connector		122	00044005	Connector (UC, EW, EI)
	87	CKS1083	Connector	•	123	CWA1007	AM Unit (UC, EW, EI)
	88	CKS1415	Connector	•	124	CXK2200	CD Mechanism Unit
	89	CSS1027	Crystal		125	DWDocDocoDWo	Cushion
(a)	90	CWX1181	CD Unit(UC)		126	PMF26P060FMC	Screw
(a)		CWX1184	CD Unit(EW, EI)		127	0001000	Connector
•		CWX1188	CD Unit(WG)		128	CSS1030	Crystal
	91		Plug		129		Plate
	92		Plug(4P···UC, EW, EI)		130		Case(WG)
			Plug(10P··WG)		131		Insulator(WG)
	93		Plug		132	BMZ30P050FMC	Screw(WG)
	94	CKS1328	Connector				
	95		Spacer				
	96		Insulator				

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Parts	List
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	Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
Α		1	BMZ26P030FMC	Screw Bracket		46 47		Holder Spacer
		2 3	CLA1311	Collar		48		Arm Unit
			CBA1062	Screw		49	CBH1134	Spring
		4 5	CBH1182	Spring		50	CNM2152	Spacer
		6	CNV1641	Holder		51		Lever Unit
		7	anus s 05	Arm		52		Bracket
		8	CBH1137	Spring		53	CNV1634	Roller
		9	CBA1076	Screw P. C. Poond		54	CBF1002	Washer
		10		P.C.Board		55	CBH1133	Spring
		11		Bracket Unit		56 57		Bracket Unit
		12		Chassis Unit		57	CNV1632	Bearing
		13	00.1077	Cushion		58 59	CBH1181	Spring
		14	CBA1075	Screw Unit		59	CMII1 COO	Arm Unit
В		15	CXA2148	Damper Unit		60	CNV1628	Gear
		16	CBH1139	Spring		61	CNV1627	Gear
		17	CNV1633	Holder		62	CNV1629	Gear
		18	YE20FUC	Washer		63	CXA2456	Gear Unit
		19	CNV1631	Cam		64	AVIII 005	Bracket Unit
		20	CBF-166	Washer		65	CNY-265	Cushion
		21		Bracket	(1)	66	CXA1910	Carriage Unit
	21 22 23 24	CNV1636	Roller		67	CBH1136	Spring	
		23		Guide		67 68 69		Arm Unit
		24	ADUI 1 0F	Arm Unit		69	OND 1 OF O	Spacer
		25	CBH1135	Spring		70	CNR1079	Ball
		26	CNV1884	Bearing		71	CNV1643	Clamper
		27	CBA1070 Scr	Screw		72		Guide
	**	28	CSN1009	Switch (Disc Set)		73		Chassis Unit
		29	CNV1644	Holder		74	CNC1738	Holder
		30	HBA-175	Screw		75	CNC1739	Holder
	**	31	CXA2129	Motor Unit(Loading)		76	PMS20P030FMC	Screw
		32		Bracket		77	HBA-163	Screw
_		33	CKS-719	Connector		78	CBH1138	Spring
		34	CKS-721	Connector		79		Bracket Unit
	*	35	SLH-34VC3F	LED		80	•	Holder Unit
		36	CNV2061	Holder		81	CBA-098	Screw
		37		Connector		82		Bracket
		38	CNP1711	P.C.Board	**	83	CXA2133	Motor Unit (Carriage)
		39	YE15FUC	Washer		84	CBH1104	Spring
D		40		Arm Unit		85	CNV1844	Spacer
		41	CLA1472	Collar		86	CNV1780	Holder
		42		Lever		87	CNV1674	Holder
		43	CLA1309	Collar	**	88	CSN-094	Switch (Home
		44	CNV1630	Gear	**	89	CXM1033	Motor Unit (Spindle)
		45		Arm Unit	**	90	CNT1020	Belt

<u>Mark</u>	No. 91 92 93 94 95	Part No. CXA2375 CNV1781 CNP1709	Description Screw Unit Holder P.C.Board Shaft Shaft	<u>Mark</u>	No. 101 102 103 104 105	Part No. CNC1736 CLA1319 CBH1106 CNV1513	Description Holder Screw Holder Unit Spring Rack
	96 97 98 99 100	CNV1512 CGY1007 CBL1010 CBH1105	Holder PU Unit Short Pin Spring		106 107	CNV1863	Cushion Cover







ORDER NO. CRT 1166

HIGH-POWER COMPACT DISC PLAYER WITH FM/AM TUNER

UC, EW, EI



Note:

- See the separate manual CX-173 (CRT1161) for the CD mechanism description.
- See the service manual CDX-M100 (CRT1136) for CD mechanism circuit description.

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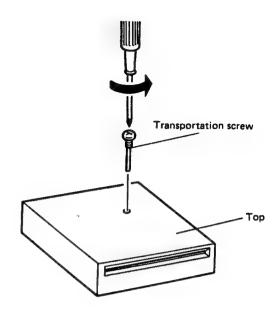
PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A. 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada

PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

FK MAY 1988 Printed in Japan

• CD Player Service Precautions

- 1. Since these screws protects the mechanism during transport, be sure to affix it when it is transported for repair, etc.
- 2. For pickup unit (CGY1007) handling, please refer to "Disassembly" (Fig. 4). During replacement, handling precautions shall be taken to prevent an electrostatic discharge (protection by a short pin).
- 3. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.



1. SPECIFICATIONS

General Power source Grounding system Max. current consumption	Negative type
Dimensions (chassis)	178 (W) × 50 (H) × 150 (D) mm [7 (W) × 2 (H) × 5–7/8 (D) in.]
(nose)	170 (W) × 46 (H) × 16 (D) mm
	6-3/4 (W) × 1-3/4 (H) × 5/8 (D) in 1
Weight	1.8 kg(4 lbs.)
Ampiner	
Continuous power output is 10 Vichannels driven 50 to 15,000 Hz wi	th no more than 5 % THD.
Max. power output	20 W + 20 W (EIAJ)
Load impedance	· · · · · · · · 4 Ω (4–8 Ω allowable)
Max. output level/ output impedance (pre out)(UC).	500 mV/1 kΩ
Max. output level/ output impedance (pre out) (WG	. EW, El)250 mV/1 kΩ
Tone controls (bass)	- 10 dP (100 Hs)
(treble)	± 10 dB (100 Hz)
Loudness contour	+ 10 dB (100 Hz) + 7 dB (10 kHz)
	(volume: - 30 dB)
CD Player	
System	Compact disc audio system
Usable discs	Compact diec
Signal format	Sampling frequency: 44.1 kHz
Nurr	Der of quantization hite: 16: linear
rrequency characteristics	5-20 000 Hz (+ 1 dR)
Signal-to-noise ratio	. 85 dB (1 kHz) (IFC-A network)
Cynamic range	
vvow and flutter	Below measurement range
Distortion factor	
Number of channels	

• UC

rivi tuner
Frequency range
(0.2 MHz channel step)
(50 kHz channel step)
Usable sensitivity
50 dB quieting sensitivity 17 dBf (1.9 μ V/75 Ω , mono)
Signal-to-noise ratio
Distortion 0.20% (OT D) 4 (OT D)
Distortion
Frequency response 30–15,000 Hz (± 3 dB)
Stereo separation 40 dB (at 65 dBf, 1 kHz)
Selectivity
AM tuner
Frequency range
(10 kHz channel step)
(9 kHz channel step)
Usable sensitivity
Selectivity (10 kHz channel ston)
Selectivity (10 kHz channel step)
(9 kHz channel step) 50 dB (± 9 kHz)
- 14/0 FM/ F/

• WG, EW, EI
FM tuner
Frequency range
Usable sensitivity
50 dB quieting sensitivity 17 dBf (1.9 μV/75 Ω, mono
Signal-to-noise ratio
Distortion 0.3% (at 65 dBf, 1 kHz, stereo
Frequency response
Stereo separation
MW tuner
Frequency range
Usable sensitivity
Selectivity
LW tuner
Frequency range
Usable sensitivity 30 μV (30 dB) (S/N: 20 dB)
Selectivity 50 dB (± 1 kHz)

These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

Specifications and the design are subject to possible modification without notice due to improvements.



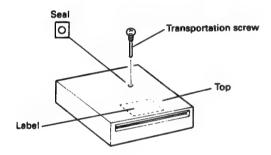
2. SAFETY INFORMATION (DEH-66/EW, EI)

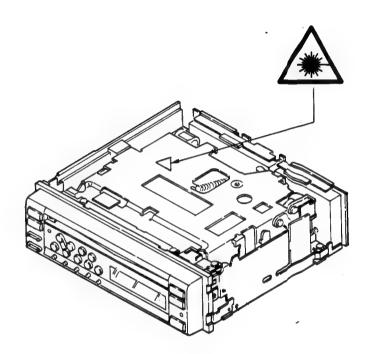
- 1. Safety Precautions for those who Service this Unit.
- Follow the adjustment steps (see pages 10 through 31) in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

- 1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
- 2. During repair or tests, do not view laser beam for 10 seconds or longer.
- 2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.
- 3. The triangular label is attached to the mechanism unit plate unit.







4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.

Wavelength

= 780 nanometers

Radiant power

= 69.7 microwatts

(Through a circular aperture stop having a diameter of 80 millimeters)

0.55 microwatts

(Through a circular aperture stop having a diameter of 7 millimeters)

3. CHANGING THE TUNING STEPS (DEH-66/UC)



Changing The Tuning Steps

The unit is shipped from the factory preset for 10 kHz steps in AM and 0.2 MHz steps in FM. The following procedure should be used for applications outside of North America, Central America and South America to change the tuning steps and frequency ranges.

- 1. Turn the ignition switch off.
- While pressing both the (+) and the (-) sides of button

 turn the ignition switch on. It should be noted that changing the tuning steps also deletes frequencies stored in the tuning memories.

	Specification	Specification Initial setting			
AM	Tuning steps	10 kHz steps	9 kHz steps		
AM	Frequency range	530 – 1,620 kHz	531 - 1,602 kHz		
514	Tuning steps	0.2 MHz steps	50 kHz steps		
FM	Frequency range	87.9 - 107.9 MHz	87.5 - 108 MHz		

4. SECRET CODE

This unit is equipped with a secret code function. The secret code (4-digit) electronically locks the unit to reduce the danger of theft.

The code is preset to [][][] at the time of purchase, and the unit can be used normally without altering the code as preset. It is recommended, however, that the user change the code to another value to take full advantage of the anti-theft properties of this system.

Once a code is set, the unit will operate normally without input of the secret code, even if the ignition of the vehicle is switched OFF and then ON again. Should power to the unit be interrupted due to a battery change, repairs, however, the unit will fail to operate when power is restored unless the preset secret code is first entered. Three consecutive wrong inputs of the code will cause the unit to lock electronically and accept no input of code for three hours. Once operation is restored, three more wrong code inputs result in another three hours of electronic lock up. This feature helps to prevent breaking of the secret code through sequential or random input.

These features mean that once the power supplied to the unit is completely cut, further operation is impossible except for those who know the secret code. This makes the unit unusable if stolen, thus reducing the danger of theft.

- When taking the unit to a service station for repair, be sure to either tell the service personnel of the registered code or return the value to \(\Pi \) \(\Pi \) \(\Pi \).
- Should you forget your registered secret number, consult your local service station taking along such proof of purchase and ownership as the original receipt, etc.

Accessory Sticker and Card

- Affix the sticker on a window of the vehicle in which the unit is installed to inform potential thieves of the anti-theft function of the unit.
- Write the secret code, unit model number, and unit serial number on the card and store it in a safe place outside of the vehicle itself.
 The serial number of this device is located on the bottom of the unit. This information can then be made available to the police and your PIONEER service station should your unit be stolen.

• UC



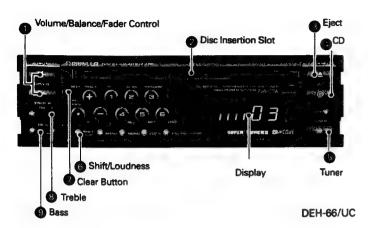


WG, EW, EI





5. ADJUSTING VOLUME AND TONE



Using the Clear button

Switching Power On

Tune

Press button to switch the tuner power on. Press button again to switch the power off.

CD Player

When a disc is inserted half-way into the disc insertion slot with its label side upward, the disc is automatically loaded and played. Press button to stop play. Press button again to restart play from the beginning of the track at which play was stopped. To eject the disc, press button .

- To change from disc mode to tuner mode, press button .
 To change from tuner mode to disc mode, press button .
- When the power is switched on, the display shows the volume for about 2 seconds.

Adjusting Volume, Balance and Fader

When the display indicates disc or tuner, press button to adjust the volume. Each press of button than changes the display and the function of button as follows:

Volume → Baiance → Fader

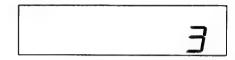
Adjusting Bass and Treble

Adjusting Bass

Pressing the (+) side of button • increases bass, while the (-) side decreases bass.

Adjusting Treble

Pressing the (+) side of button increases treble, while the (-) side decreases treble.



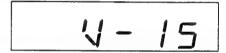
 When you're adjusting balance, fader, bass, or treble settings, the indicator will stop at the center setting. About 3 seconds after adjustment has been made, the display returns to its previous state.

Using the Loudness Function

Press button for about two seconds and the "LD" indication will appear on the display. This loudness function lets you enhance both high and low frequencies to give a more natural sound at low volumes. To cancel this function, press button for about two seconds.

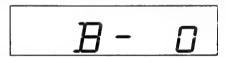
Adjusting Volume

Pressing the (+) side of button (1) increases the volume, while the (-) side decreases it.



Adjusting Balance

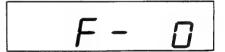
Pressing the (+) side of button **3** shifts the balance to the left speaker, while the (-) side shifts it to the right speaker.



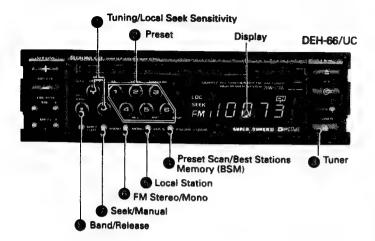
Adjusting the Fader

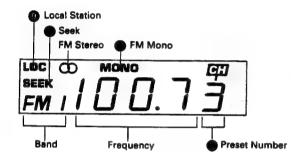
This function controls the balance between the front and rear speakers of a 4-speaker system. Pressing the (+) side of button shifts the balance to the front speakers, while the (-) side shifts it to the rear speakers.

For 2-speaker systems, set F-0.



6. USING THE TUNER





1 Press button 6 to switch the tuner power on.

2 Press button 1 to select a band.

FMI-FMII-FMIII-FM(M)

(FM1) (FM2) (FM3

3 Use seek tuning to tune in a frequency.

Confirm that the "SEEK" indicator ● is shown on the display (if not, press button ●).

Press the (+) side of button • to automatically tune in the next higher receivable frequency, and the (-) side for a lower frequency.

4 Adjust volume and tone (see page 4).

5 Assign the tuned frequency to one of the buttons in bank

(preset memory).

Press and hold down one of the buttons in bank for at least two seconds. The frequency is assigned to the selected button when the preset number stops flashing on the display. Up to 18 FM stations (6 each for FMI, FMII and FMIII), and six AM stations can be assigned to the preset memory buttons in bank.

6 Once a frequency is assigned to a button in bank , you just need to press that button to tune it in.

This also causes the number of the button pressed to appear at position
on the display.

Preset Scan Tuning

This function lets you automatically monitor the stations assigned to the preset buttons.

- Press button to make the channel ("CH") of the preset number

 flash on the display. Each station assigned to the buttons in bank will be automatically tuned in for about eight seconds.
- When you hear a station that you like, press button
 again to cancel preset scan tuning and remain at that station.

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in bank , from strongest to weakest. It comes in handy when trying to find local stations while driving.

Press button and select a band.

 Hold down button . After about two seconds, a "beep" will sound to signal that the BSM search has started. At this time, "----" will flash on the display.



The frequency display will return once BSM search is complete, and frequencies are assigned to buttons 1 through 6 in bank .

 At the end of the BSM search, the displayed frequency is that assigned to button 1 of bank .

 If there are fewer than six strong stations in the area, some of the buttons in bank will not be assigned frequencies, so they will retain any frequencies assigned to them previously.

BSM search may take as long as 30 seconds in areas where there
are few strong stations.

You can cancel BSM search by pressing button ...

Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

Press button to turn "SEEK" indicator off.

Each press of the (+) side of button increases the frequency in 0.2 MHz steps in the FM band, 10 kHz in the AM band. Pressing the (-) side of button decreases the frequency. Holding down either side of button changes the frequency at high speed.

 FM frequencies are tuned in 50 kHz steps and AM frequencies in 9 kHz steps after the tuning steps are changed.

Switching between FM Stereo and Mono

Generally, it is best to allow the "Super Tuner III" function to automatically set the optimum listening conditions. When there is a large amount of noise, you can press button for clearer, mono reception ("MONO" will appear on the display).

Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for AM to match local conditions.

Changing the Local Seek Sensitivity

Use button to select a band.

Hold down button for more than two seconds to change to the local seek sensitivity display.



(Example: LOC2)

While still holding down button , press the (+) side of button to increase the sensitivity level, and the (-) side to decrease the level as shown below.

FM: LOC1=LOC2=LOC3=LOC4

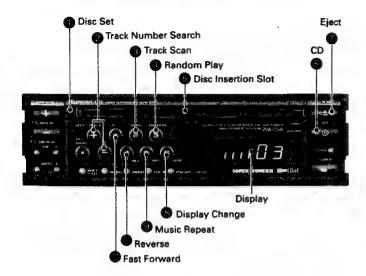
AM : LOC1=LOC2

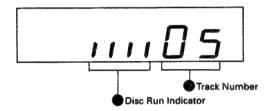
The LOC4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.

Switching Between Local and DX

Press button to switch between Local and DX (distant) seek tuning. When "LOC" is shown on the display, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

7. PLAYING COMPACT DISCS





1 When a disc is inserted half-way into the disc insertion slot 3 with its label side upward, the disc is automatically loaded and played.

(Track number and disc run indications will appear on the display.)

2 Use track number search to select a track.

Press the (+) side of button • to increase the number at position • , or the (-) side to decrease the number. Holding either side of button • down changes the track number at high speed.

- 3 Adjust volume and tone (see page 4).
- 4 To stop CD play, press button 6.

You can restart CD play from the beginning of the track at which play was stopped by pressing button .

5 To eject or change the disc, press button **2**.

If an ejected disc is pushed back into the slot, it will be loaded and played again.

Note:

- It takes a short time after a disc is loaded before it is played. This
 is because the CD player requires a setup time to read digital signals from the disc.
- Do not insert two discs into the slot at the same time. This may cause a malfunction.

Using Track Scan

This function lets you scan through the tracks on a disc by playing only the first ten seconds of each track.

1. Press button (("SC" will flash).



- To cancel track scan and continue play at the current track, press button again.
- After track scan plays through all of the tracks, disc play resumes from the beginning of the track from which track scan was started

Using Music Repeat

This function lets you listen to a track as many times as you wish.

While the track you want to repeat is playing, press button . "RP" will appear on the display. Now the track will repeat until the music repeat function is canceled.



- 2. To cancel music repeat, press button @ again.
- When music repeat is not operational, the whole disc will be played repeatedly.

Using Random Play

This function uses the built-in microprocessor to randomly play tacks from the disc.

 Press button . "Rd" will appear on the display. Once the current track has been played, the microprocessor will randomly select the next track.



- 2. To cancel random play, press button
 again.
- When the display shows the amount of elapsed disc-play time, it does not show "RP" or "Rd".

Using Fast Forward and Reverse

Press button
for fast forward, and button for reverse. You can hear the recorded sound during fast forward and reverse.

Amount of Elapsed Disc-Play Time

Press button to make the display show the amount of elapsed disc-play time. Press button again to return to the normal display.



 When a disc in which there are several seconds between tracks is used, the amount of elapsed disc-play time is shown, for example, as -*02 and -*01.

Last Track Memory

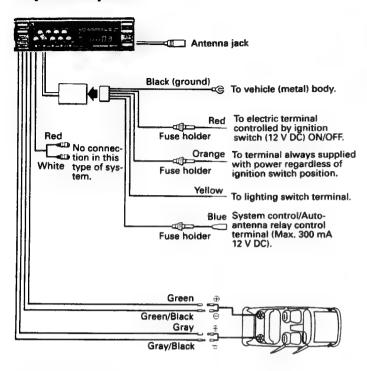
This player has a last track memory to restart play from the beginning of the track being played when the disc was stopped, ejected, and then loaded again.

 When the disc is replaced with another, this function does not work, and play starts from the first track.

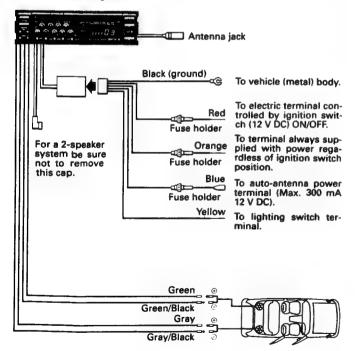
8. CONNECTION

UC

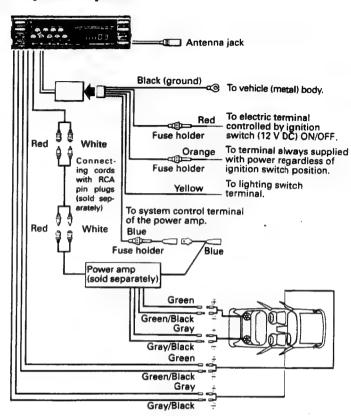
2-speaker system



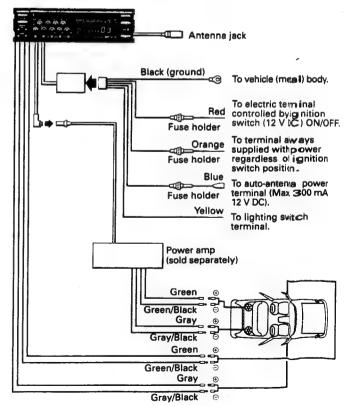
WG, EW, EI2-speaker system



4-speaker system



4-speaker system

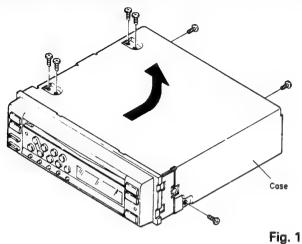




9. DISASSEMBLY

Removing the Case

1. Remove seven screws, and then remove the case.



Removing the Grille Assy

- Remove two screws A, and then remove the two side covers.
- 2. Remove two screws B.
- 3. Disengage the claws indicated by arrows.
- 4. Disconnect the three connectors, and then remove the grille assy. (Fig. 3)

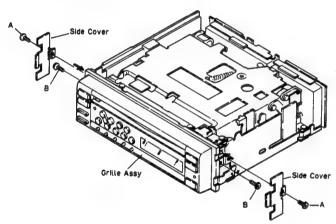


Fig. 2

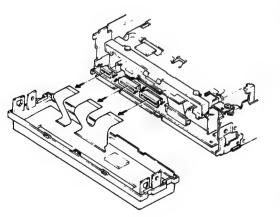


Fig. 3

• Removing the CD Mechanism Unit

- 1. Remove four screws.
- 2. Disconnect the two connectors, and then remove the CD mechanism unit.

NOTE; When removing the flexible p.c. board, always insert a shorting pin or insert an inter-pattern short (jumper) before disconnecting the board from the connector.

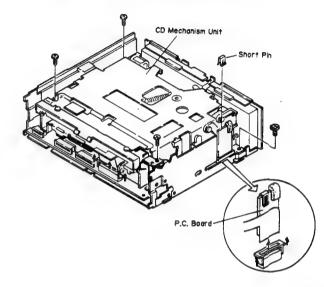


Fig. 4

Removing the Amp Assy

- 1. Remove two screws, and then remove the amp assy.
- 2. Disconnect the two connectors. (Fig. 6)

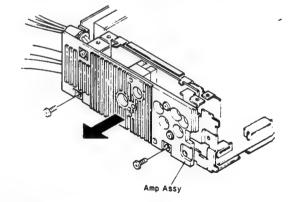


Fig. 5

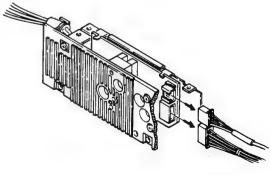


Fig. 6

• Removing the Chassis Unit

- 1. Remove a screw C.
- Remove a screw D, and then remove the antenna holder.
- 3. Remove the cords from chassis unit.
- 4. Remove solder at location indicated by arrow.
- 5. Unbend seven tabs and then raise CD unit to remove from chassis unit.

Note: When the chassis unit is disassembled, the ground connection is removed. That is why when checking the tuner unit with the chassis unit disassembled, the CD unit ground and the tuner unit ground are shorted.

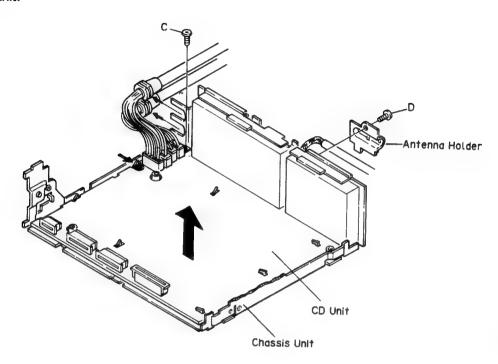
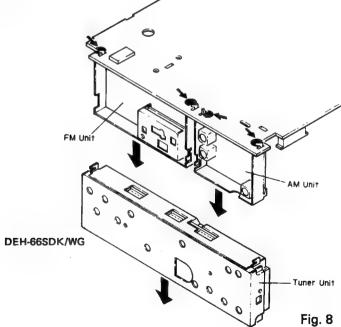


Fig. 7

• Removing the AM, FM, Tuner Unit

 Remove solders and unbend tabs on back of each unit circuit board until straight.

2. Pull out unit as shown in illustration.





10. ADJUSTMENT

1) Precautions

DEH-66 uses a single power supply (+5V) of the regulator. The signal reference potencial, therefore, is connected to pin no. 14 (approx. 2.5V) of IC351 (CXA1081M) instead of GND. (VC at test point)

If VC and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to VC and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to VC with the channel 2 negative probe connected to GND.

And since the frame of the measuring instruments is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

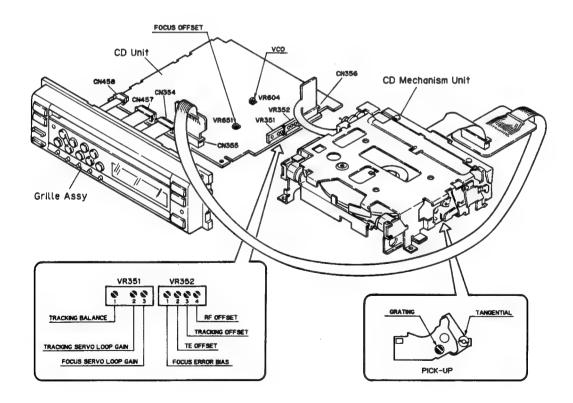
If by accident VC comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

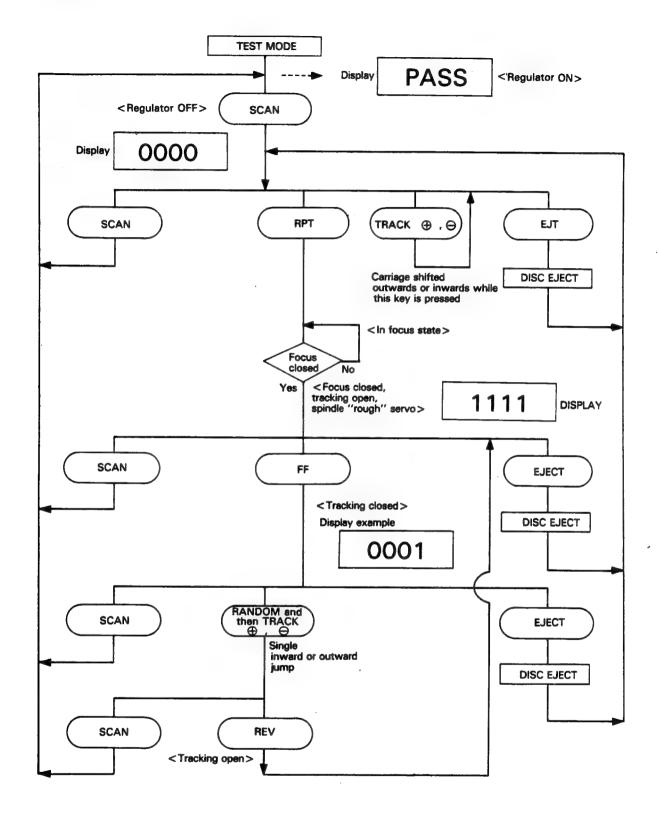
- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and/or electrical shocks to the system when making adjustments.
- Test mode starting procedure
 While pressing the LOC.S button and the TRACK (~) side button, press Clear button.
- Test mode cancelation Press Clear button.
- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit. Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.
 - During PLAY, even if the eject button is pressed, the disc will not be ejected and the unit will remain in the PLAY mode.
 - O The unit will not load a disc.

When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

2) Adjustment Point



Flow Chart



10.1 Focus Offset Adjustment

Purpose: To adjust the electrical offset of the focus amplifier to zero. Maladjustment symptoms: No focus closing Measuring equipment/ • Multi-meter or oscilloscope Measuring point • FEO2 Test disc and setting No disc, test mode Adjustment position VR651 Multi-meter (or Oscilloscope) **CD UNIT** FEO2 BYPS1 BYPS2 O. Fig. 11 **Adjustment Procedure** 1. Connect BYPS 1 and BYPS 2 to GND. 2. Switch regulator ON. 3. Using VR651, adjust the FEO2 DC voltage in reference to VC to a value of 0 ± 25 mV.

Test point CD Unit

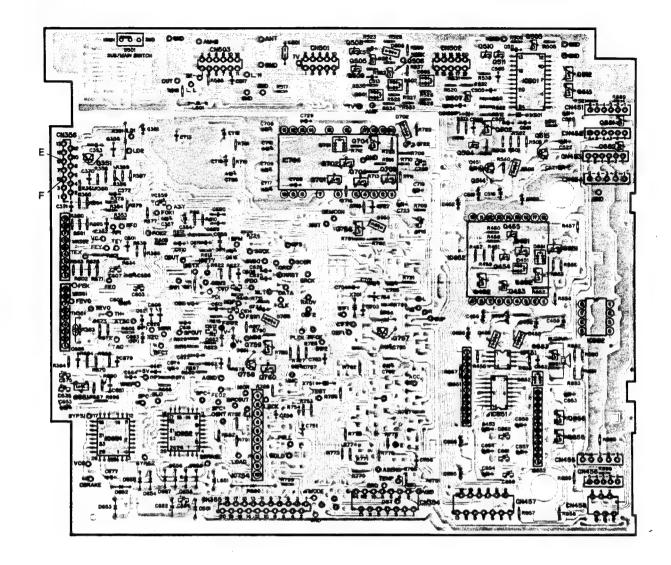


Fig. 10

10.3 RF Offset Adjustment

- Purpose: To adjust the RF amplifier offset to a suitable value

 Maladjustment symptoms: Focus closure fails readily
- Measuring equipment/ iias
 - gs
- Measuring pointTest disc and setting
- Adjustment position
- Oscilloscope
- RFO
- No disc
- Test mode
- VR352-4 (RFQ)

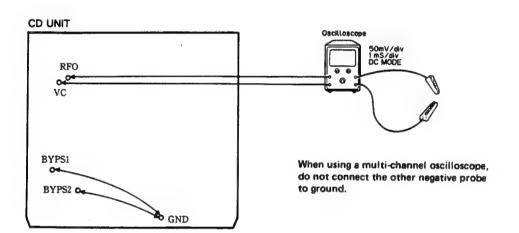


Fig. 13

Adjustment Procedure

- 1. Connect BYPS 1 and BYPS 2 to GND.
- 2. Switch regulator ON.
- 3. Using the oscilloscope, measure the RFO DC voltage in reference to VC, and adjust VR352-4 (RFO) to obtain a reading of \pm 25mV.

10.2 VCO Free Run Frequency Adjustment

- Purpose: To adjust the EFM decoder reference clock free- run frequency to a suitable value
- Maladjustment symptoms: Spindle lock not possible, distorted sound or no sound at all
- Measuring equipment/ iias
- Measuring point
- Test disc and setting
- Adjustment position
- Frequency counter, extension cables
- Pin no.70 (PLCK) of IC701 (CXD1135Q)
- No disc
- Test mode
- VR604

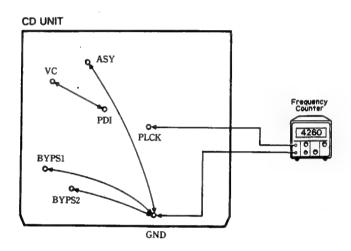


Fig. 12

Adjustment Procedure

- Connect pin no.26 (TP ASY) of IC351 to GND. Connect BYPS 1 and BYPS 2 to GND.
- 2. Connect pin no.1 (TP VC) of IC601 to pin no.28 (TP PDI).
- 3. Switch regulator ON while in test mode.
- Connect the frequency counter to pin no.70 (TP PLCK) of IC701 (CXD1135Q).
- 5. Adjust VR604 to obtain a frequency of 4,26 \pm 0.005MHz.
- 6. Switch regulator OFF.
- Disconnect the leads connecting TP VC to TP PDI, and TP ASY to GND.

Note: Connect TP VC and TP PDI with leads kept as short as possible.

Note: Connect the frequency counter ground to TP GND as shown in the figure.

10.5 TE Offset Adjustment - I

Purpose: To adjust the electrical offset of the tracking servo to zero. Maladjustment symptoms: Search times too long, carriage run-away DC voltmeter Measuring equipment/ Measuring point • TAO low-pass filter output Test disc and setting No disc • Test mode Adjustment position VR352-2 (TEO) CD UNIT

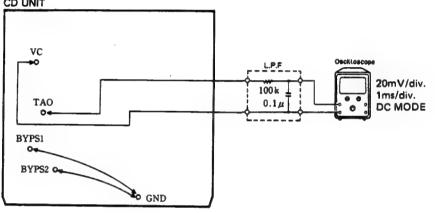


Fig. 15

Adjustment Procedure

- 1. Check that BYPS 1 and BYPS 2 are connected to GND.
- 2. Switch regulator ON while in test mode.
- 3. Press the FF key to close tracking.
- 4. Using VR352-2 (TEO), adjust the TAO LPF output DC voltage in reference to VC to a value of 0 ± 10mV.
- 5. Switch regulator OFF.

10.4 Tracking Offset Adjustment

- Purpose: To adjust the electrical offset of the tracking amplifier to zero
- Maladjustment symptoms: Search times too long, carriage run-away
- Measuring equipment/ iias
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope
- TAO low-pass filter output
- No disc
 Test mode
- VR352-3 (TO)

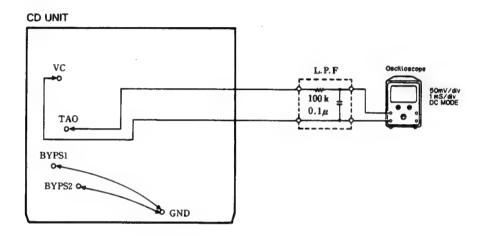


Fig. 14

Adjustment Procedure

- 1. Insert a low-pass filter between TAO and VC.
- Check that BYPS 1 and BYPS 2 are connected to GND. GND.
- 3. Switch regulator ON.
- 4. Using the oscilloscope, measure the TAO LPF output DC voltage in reference to VC, and adjust VR352-3 (TO) to obtain a reading of 0 \pm 25mV.

The low-pass filter may be left in place for later adjustments.

10.6 Tracking Balance Adjustment - I

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away
- Measuring equipment/ iias
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope
- TEY (Tracking error signal), low-pass filter output
- SONY TYPE 4 (or TYPE 3) Test mode
- VR351-1 (T. BAL)

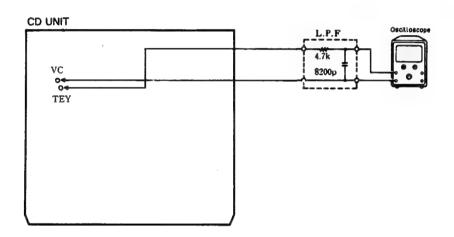
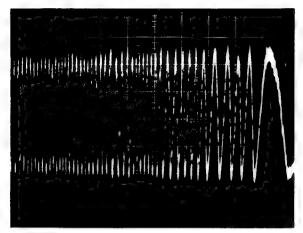


Fig. 16

Adjustment Procedure

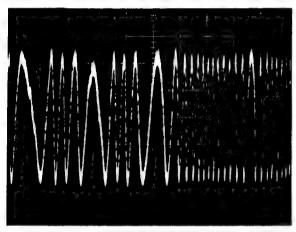
- 1. After checking that regulator is OFF, connect the low-pass filter as shown in the diagram.
- 2. Disconnect BYPS 1 and BYPS 2 from ground.
- 3. Set the test disc (SONY TYPE 4) in magazine tray 6 and load the magazine. Switch regulator ON.
- Using the TRACK ⊕ or ⊖ key, move the pick-up to about the <u>center</u> of the signal surface.
- 5. Press the RPT key to close focus.
- Using an oscilloscope, observe the TEY signal in respect to VC. Then adjust VR351-1 (T. BAL) to set the positive and negative amplitudes to the same levels. (See Fig. 17-19.)
- 7. Switch the power OFF.

The low-pass filter may be left in place for later adjustments.



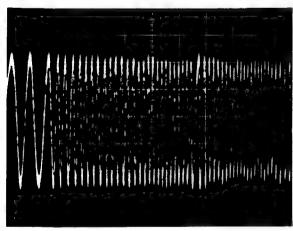
+5% NG

Fig. 17



±0% OK

Fig. 18



- 5% NG

10ms/div. 0.2V/div. DC Mode Fig. 19

10.7 Tangential Skew Check

- Purpose: To check whether tangential skew has been misaligned or not when replacing the pick-ip unit.
- Maladjustment symptoms: No disc playback; track jumping
- Measuring equipment/ iias
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope, extension connectors, screwdriver
- RFO
- SONY TYPE 4 (or TYPE 3) Normal mode
- · Pick-up tangential adjustment screw

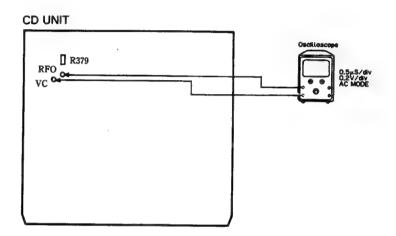
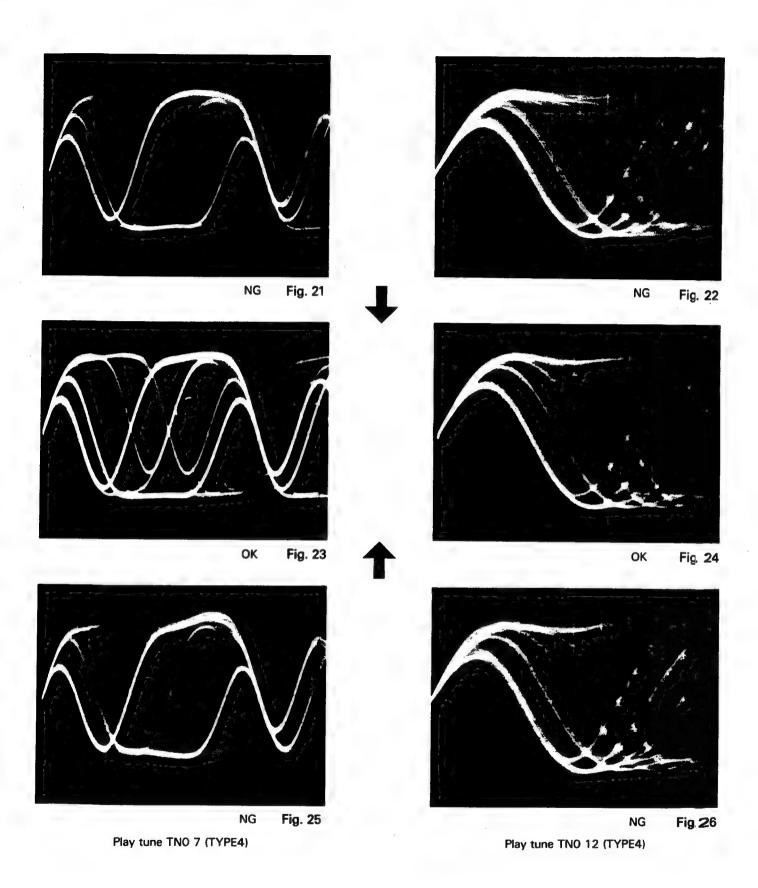


Fig. 20

Adjustment Procedure (with R379 removed)

- 1. Remove R379 (but reconnect after completing adjustment).
- 2. Play tune TNO 7 in normal mode. (TYPE 3: TNO 23)
- Check that the valley at the 11T section of the RF waveform is flat.
- 4. If out of adjustment, readjust to obtain a flat RF waveform. (See Fig. 21-26) Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.)
- 5. Switch the power OFF and reconnect R379.
- 6. Apply "screw-lock" to the tangential adjustment screw.
- 7. After adjusting tangential skew, also adjust the grating.
- If tangential skew is seriously out of adjustment, carriage stopping and run-away tend to occur in normal mode. In this case,
 - a) Switch to test mode,
 - b) Shift the pick-up to signal surface center using TRACK ⊕ or ⊖ key.
 - c) Press the RPT key to close focus.
 - d) Press the FF key to close the tracking.

- e) Observe RFO in respect to VC, and turn the tangential adjustment screw to obtain a flat waveform at the 11 section.
- f) Repeat the adjustment resuming from step 2.



10. 8 Grating Adjustment

- Purpose: The grating may need adjustment in a replaced pick-up assembly.
- Maladjustment symptoms: No disc playback; track jumping
- Measuring equipment/ iias
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope, clock driver, grating adjustment filter (bandpass filter),
 AC millivoltmeter, two low-pass filters
- TEY, E LPF output, F LPF output
- SONY TYPE 4 (or TYPE 3) Test mode
- Pick-up grating adjustment hole

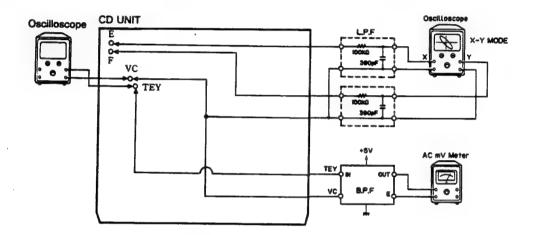


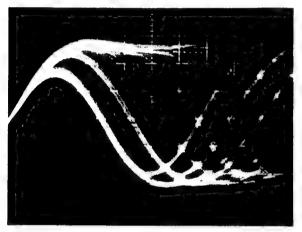
Fig. 30

Adjustment Procedure

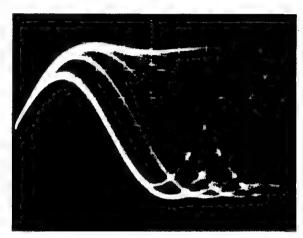
- 1. Connect a low-pass filter (100k, 390p) to test points E, F, and VC as shown in the above diagram.
- 2. Switch regulator ON in test mode, and load a disc.
- 3. Press the RPT key to close focus.
- 4. Press the FF key to close tracking.
- 5. Press the RANDOM and using the TRACK ⊕ or ⊖ key, move the pick-up to about the center of the signal surface (tune TNO 6). (TYPE 3: TNO 7)
- 6. Press the REV key to open tracking.
- 7. While monitoring the TEY filter output by AC milli-voltmeter, turn the grating adjustment hole slowly. The AC voltage increases and decreases while turning the screw. Search for the minimum voltage level. (This corresponds to the position where the grating is on a track, and is referred to as the null point.)
- Then while monitoring TEY by oscilloscope, turn the driver slowly clockwise from the null point (as seen from under the lens) until the first waveform peak amplitude is reached. (See Fig. 32-37)

Adjustment Procedure (without R379 removed)

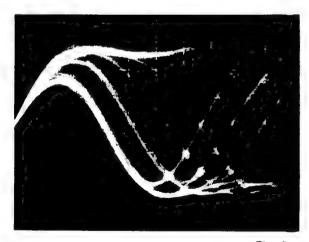
- 1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
- 2. Turn the tangential adjustment screw to obtain a good RF waveform eye pattern. Turn the adjustment screw both clockwise and counterclockwise to points where the eye pattern deteriorates, and take the midway point as the adjustment point. As a general guide, look for an overall clear waveform, and one of the diamond shapes in the eye pattern. The diamond shapes should appear in fine lines at the point of optimum adjustment. Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.) (See Fig. 27-29)
- 3. Apply "screw-lock" to the tangential adjustment screw.
- 4. After adjusting tangential skew, also adjust the grating.



NG Fig. 27



OK Fig. 28



NG Fig. 29

- With the E low-pass filter output connected to the X axis
 of the oscilloscope, and the F low-pass filter output connected to the Y axis, apply an input in AC mode and observe the
 Lissajous figure.
- 10. Using the driver, adjust the Lissajous figure to a single line (or as close as possible).
- 11. Switch regulator OFF and remove the filters.

B.P.F.

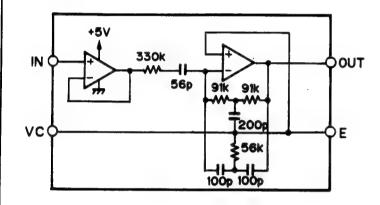
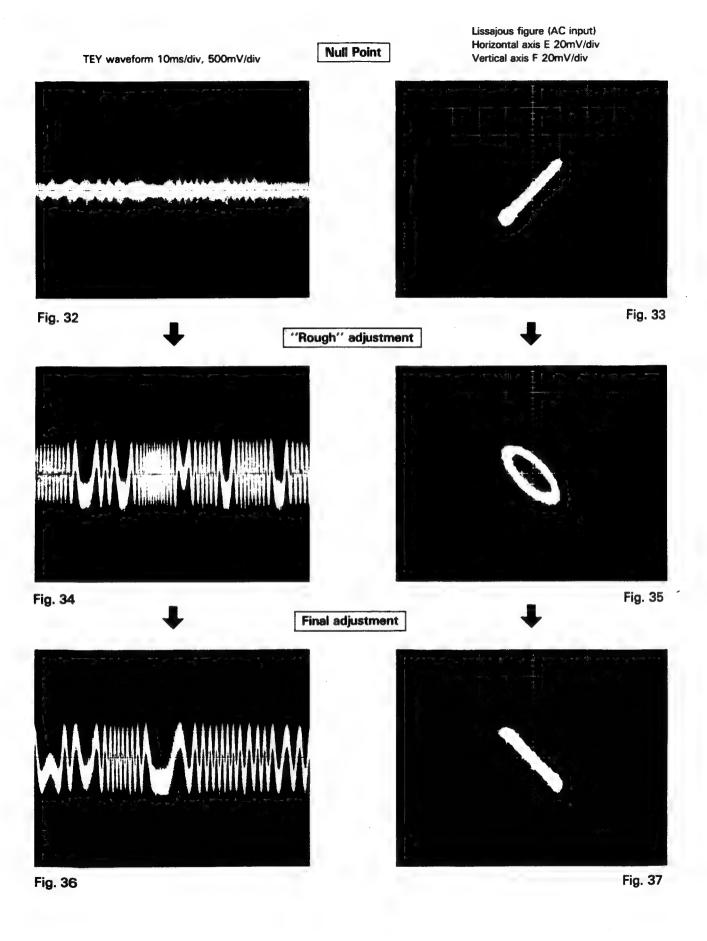
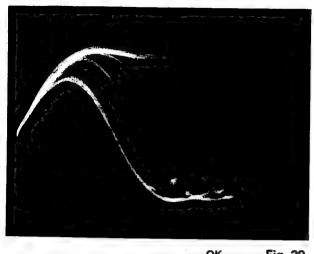


Fig. 31



10.9 Focus Bias Adjustment

Purpose: To adjust the focus servo bias to an optimum value Maladjustment symptoms: Focus closing difficulty, poor playability Oscilloscope Measuring equipment/ • RFO Measuring point • SONY TYPE 4 (or TYPE 3) • Normal mode Test disc and setting Adjustment position • VR352-1 (FEB) **CD UNIT** 0.2µS/div. 0.2V/div. RFO AC MODE Fig. 38 **Adjustment Procedure** 1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14) 2. Observe RFO in respect to VC in the oscilloscope, and adjust VR352-1 (FEB) to obtain maximum RF and optimum eye pattern. (See Fig. 39 and 40)



OK Fig. 39



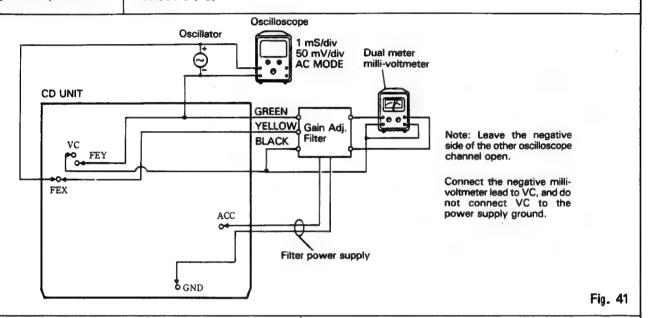
0.2μs/div. 0.2V/div. AC Mode

Before adjustment

Fig. 40

10. 10 Focus Servo Loop Gain Adjustment

- Purpose: To adjust the focus servo loop gain to an optimum value
- Maladjustment symptoms: Poor playability, reduced resistance to vibration, focus closure fails readily
- Measuring equipment/ iias
- Measuring point
- Test disc and setting
- Adjustment position
- Oscillator, gain adjustment filter, dual meter milli-voltmeter
 Same as for CDX-2
- FEX. FEY
- SONY TYPE 4 (or TYPE 3) Normal mode
- VR351-3 (FG)

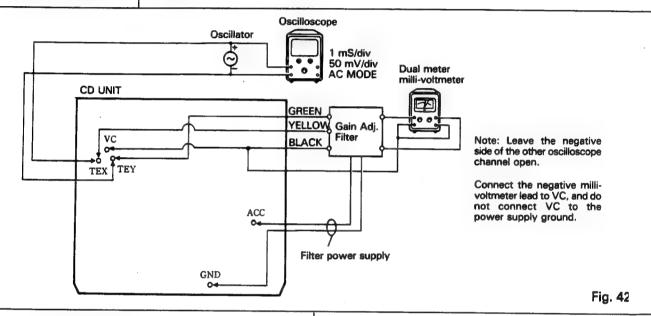


Adjustment Procedure

- After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
- 2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
- 3. Set the oscillator to 1kHz, and observe the FEX/FEY output in the oscilloscope. Adjust the oscillator output to obtain a FEX/FEY output of 200mVp-p.
- Adjust VR351-3 (FG) to obtain a milli-voltmeter difference of O ± 0.5dB.

10.11 Tracking Servo Loop Gain Adjustment

- Purpose: To adjust the tracking servo loop gain to an optimum value
- Maladjustment symptoms: Poor playability, reduced resistance to vibration
- Measuring equipment/
- Measuring point
- Test disc and setting
- Adjustment position
- · Oscillator, gain adjustment filter, dual meter milli-voltmeter
- TEX, TEY
- SONY TYPE 4 (or TYPE 3) Normal mode
- VR351-2 (TG)



Adjustment Procedure

- 1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
- 2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
- 3. Set the oscillator to 1.4kHz, and observe the TEX/TEY output in the oscilloscope. Adjust the oscillator output to obtain a TEX/TEY output of 200mVp-p.
- 4. Adjust VR351-2 (TG) to obtain a milli-voltmeter difference of 0 ± 0.5 dB.

10.12 TE Offset Adjustment - II

	Purnose:	To	adjust	the	electrical	offset	of	the	tracking	servo to	zero.
•	ruipuse.		auiusi	เมเต	CICCUICAI	Ullact	v	ri ic	HOUNIN	30140 10	ZUIU.

- Maladjustment symptoms: Search times too long, carriage run-away
- Measuring equipment/ jigs
- Measuring point
- Test disc and setting
- Adjustment position
- DC voltmeter
- TAO low-pass filter output
- No disc Test mode
- VR352-2

Adjustment Procedure

Same as for TE offset adjustment - I, but with the DC voltage of the TAO LPF output adjusted to 0 \pm 50mV.

The purpose of this additional adjustment is to correct any deviations generated when carrying out the tracking balance and tracking servo loop gain adjustments after completing TE offset adjustment - I.

10.13 Tracking Balance Adjustment - II

Purpose: To adjust the tracking servo offset to zero.

Maladjustment symptoms: Search times too long, poor playability, carriage run-away

Measuring equipment/ jigs Oscilloscope

Measuring point

• TEY low-pass filter output

Test disc and setting

• SONY TYPE 4 (or TYPE 3) • Test mode

Adjustment position

VR351-1

Adjustment Procedure

Steps 1 thru 5 same as tracking balance adjustment-l.

 Check that the level difference between the positive and negative amplitudes of the TEY signal is within 5% (See Fig. 17-19). If greater than 5%, adjust with VR351-1.

7. If further adjustment was necessary in step 6, repeat TE offset adjustment - II.

AM ADJUSTMENT (UC) *(When 9kHz tuning steps)

	No.	AM SSG(400Hz,30%)		Displayed	Adjusting	Adjustment Method
		Frequency (kHz)	Level (dB)	Frequency (kHz)	Point	(Switch Position)
Tun- ing Volt	1			1,620 *(1,602)	T203	DC V Meter:Less than 6V
VOIC	2			530 *(531)		Verify that DC V Meter is more than 2V
IF	1	1,000 *(999)	20-25	1,000 *(999)	T204, 205, 206	mV Meter:Maximum

MW/LW ADJUSTMENT (WG, EW, EI)

	No.	AM SSG (400Hz	Displayed Frequency	Adjusting Point	Adjustment Method (Switch Position)	
	140.	Frequency (kHz)	Level (dB)	(kHz)	roint	(Switch Fosition)
Tun- ing	1	(MW MODE)		1,602	T203	DC V Meter:Less than 6V
Volt	2	(LW MODE)		153		Verify that DC V Meter is more than 2V
IF	1	999	20-25	999	T204, 205, 206	mV Meter:Maximum

FM ADJUSTMENT (WG, EW, EI) * Stereo MOD.: 1kHz, L+R=90%, Pilot=10%

	No.	FM SSG (400Hz	. 100%)	Displayed	Adjusting	Adjustment Method
	140	Frequency (MHz)	Lèvel (dB)	Frequency (MHz)	Point	(Switch Position)
IF	1	98.1	60	98.1	T 51	Center Meter:0 (MONO Switch:MONO)
Fro- nt	1			108.0	L5	DC V Meter:6.5±0.2V
End	2			87.5		Verify that DC V Meter is more than 1.6V
	3	98.1	5-10	98.1	T1	mV Meter:Maximum
MPX .	1	98.1 Pilot Only※	60	98.1	VR151	mV Meter:Minimum
	2	98.1%	60	98.1	VR101	mV Meter:Best separation (MONO Switch:AUTO)
ARC	1	98.1%	3 5	98.1	VR152	mV Meter:Separation 5dB (MONO Switch:AUTO)

10.14 Tuner Section

NOTICE:

Select C1 so that total capacity of 80pF attained from the direction of the receiver jack.

Z: Output impedance of SSG.

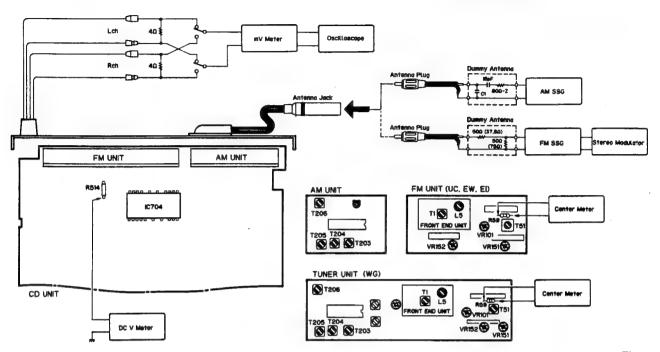


Fig. 43

FM ADJUSTMENT (UC) % Stereo MOD.: 1kHz,L+R=90%, Pilot=10% *(When 50kHz tuning steps)

	No	FM SSG (400Hz, 100%)		Displayed	Adjusting	Adjustment Method
	No.	Frequency (MHz)	Level (dB)	Frequency (MHz)	Point	(Switch Position)
IF	1	98.1	60	98.1	T 51	Center Meter:0 (MONO Switch:MONO)
Fro-	1			107.9 *(108.0)	L5	DC V Meter:6.5±0.2V
End	2			87.9 *(87.5)		Verify that DC V Meter is more than 1.6V
	3	98.1	5-10	98.1	T1	mV Meter:Maximum
MPX	1	98.1 Pilot Only*	60	98.1	VR151	mV Meter:Minimum
	2	98.1%	60	98.1	VR101	mV Meter:Best separation (MONO Switch:AUTO)
ARC	1	98.1%	35	98.1	VR152	mV Meter:Separation 5dB (MONO Switch:AUTO)

Pin No.	Pin Name	1/0	Function and Operation
73	V _{DD}	_	Power supply (+5V)
74	DA12	Output	RAOV output
75	DA13	Output	C4LR output
76	DA14	Output	C210 output
77	DA15	Output	C210 output
78	DA16	Output	DATA output
79	WDCK	Output	Strobe signal output (176.4kHz)
80	LRCK	Output	Strobe signal output (88.2kHz)

Note:

C1F1: C1F2:

C1 decoding error correction status monitor output

C2F1:

C2 decoding error correction status monitor output

C2F2: . C2FL:

Corrected status output - "H" if C2 system currently being corrected cannot be corrected

C2PO:

C2 pointer indication output - synchronized with audio data output

RFCK: WFCK: Read frame clock output - crystal oscillator 7.35kHz

Write frame clock output - f = 7.35kHz when crystal oscillator is locked

PLCK:

VCO/2 output - f = 4.3218MHz when EFM signal is locked

UGFS:

Unprotected frame synchronizing pattern output

GTOP: **RAOV:** Frame synchronization protection status indicator output

C4LR:

±4 frame jitter absorption RAM overflow and underflow indicator output

Strobe signal - 176.4kHz

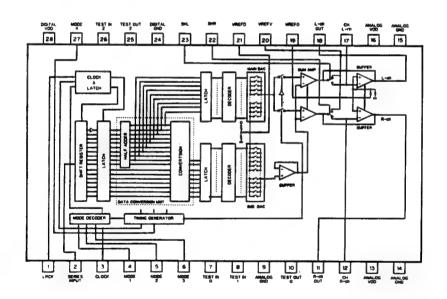
C210:

C210 inverting output

C210: DATA:

Bit clock output - 2.1168MHz Audio signal serial data output

*IC703: µPD6355G

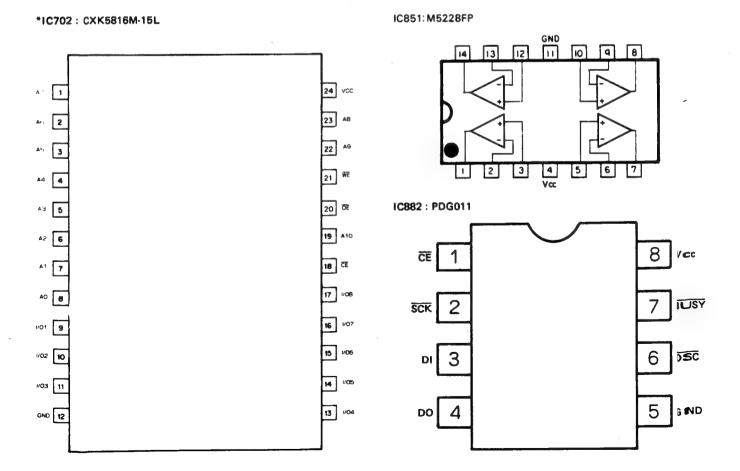


Pin Functions (μPD6355G)

Pin No.	Pin Name	1/0	Function and Operation	
1	LRCK	input	Input data left/right discriminator signal input pin "L" = Left, "H" = Right	
2	SI	Input	Serial data input pin	
3	CLK	Input	Serial input data read clock input pin	
4-6	M1-M3	Input	Input data mode selector pin	

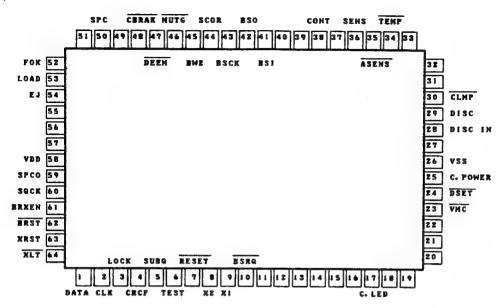
Pin No.	Pin Name	1/0	Function and Operation
36	DB02	Input/Output	External RAM data pin - DATA2
37	DB01	Input/Output	External RAM data pin - DATA1 (LSB)
38	RA01	Output	External RAM address output - ADDR01 (LSB)
39	RA02	Output	External RAM address output - ADDR02
40	RA03	Output	External RAM address output - ADDR03
41	RA04	Output	External RAM address output - ADDR04
42	RA05	Output	External RAM address output - ADDR05
43	RA06	Output	External RAM address output - ADDR06
44	RA07	Output	External RAM address output - ADDR07
45	RA08	Output	External RAM address output - ADDR08
46	RA09	Output	External RAM address output - ADDR09
47	RA10	Output	External RAM address output - ADDR010
48	RA11	Output	External RAM address output - ADDR011 (MSB)
49	RAWE	Output	External RAM write enable signal output (active "L")
50	RACS	Output	External RAM chip select signal output (active "L")
51	C4M	Output	X'tal frequency division output (f = 4.2336MHz)
52	Vss	_	Ground (OV)
53	XTAI	Input	Crystal oscillator input (f = 8.4672MHz)
54	XTAO	Output	Crystal oscillator output (f = 8.4672MHz)
55	MD1	Input	Mode selector input 1
56	MD2	Input	Mode selector input 2
57	MD3	Input	Mode selector input 3
58	SLOB	Input	Audio data output code selector input - 2's complement output if "L", offset binary output if "H"
59	PSSL	Input	Audio data output mode selector input - serial output if "L", parallel output if "H"
60	APTR	Output	Aperture correction control output - "H" when right channel
61	APTL	Output	Aperture correction control output - "L" when left channel
62	DA01	Output	C1F1 output
63	DA02	Output	C1F2 output
64	DA03	Output	C2F1 output
65	DA04	Output	C2F2 output
66	DA05	Output	C2FL output
67	DA06	Output	C2PO output
68	DA07	Output	RFCK output
69	DA08	Output	WFCK output
70	DA09	Output	PLCK output
71	DA10	Output	UGFS output
72	DA11	Output	GTOP output

Pin No.	Pin Name	1/0	Function and Operation	
7,8	TI ₀ , TI ₁	Input	Test pins	
9	A·GND		Analog stage ground pin	
10	TO0	Output	Test pin	
11	ROUT	Output	Right channel analog signal output pin	
12	CHR	Output	Right channel analog signal sample hold capacitor pin	
13	A·VDD		Analog stage power supply pin	
14,15	A·GND		Analog stage ground pins	
16	A·VDD		Analog stage power supply pin	
17	CHL	Output	Left channel analog signal sample hold capacitor pin	
18	LOUT	Output	Left channel analog signal output pin	
19	VREFO		Operation amplifier reference connection	
20	VREFV		Connection to AGND via capacitor	
21	VREFD		Connection to resistance ladder	
22	SHR	Input	Right channel analog output sample hold timing signal Active high	
23	SHL	Input	Left channel analog output sample hold timing signal Active high	
24	D-GND		Logic stage ground pin	
25	TO2	Output	Test pin	
26	TI2	Input	Test pin	
27	M4	Input	Internal logic clock selection which determines whether input from CLK pin is to be divided or not "H": No division, "L": Divide by 2	
28	D·VDD		Logic stage power supply pin	



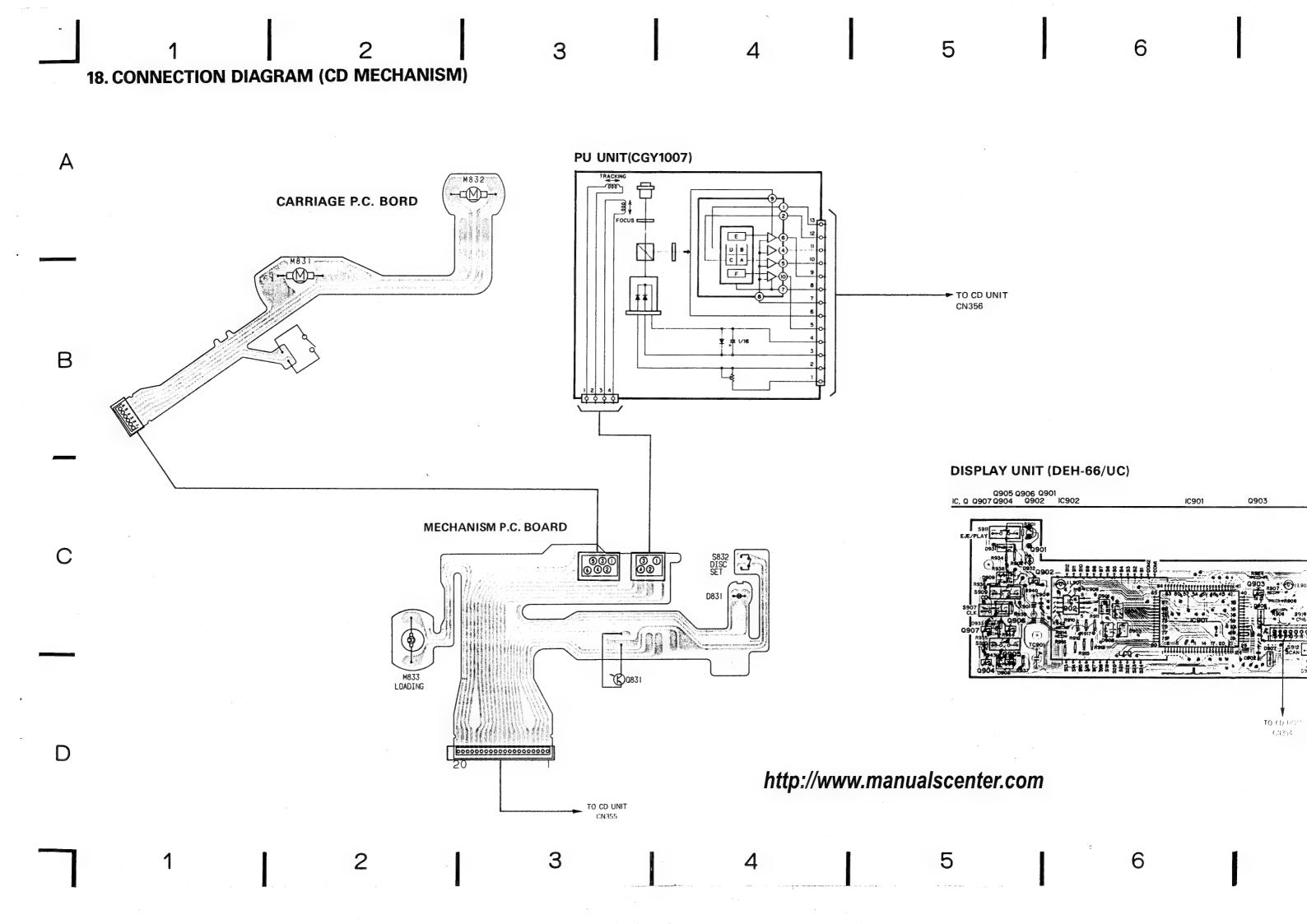
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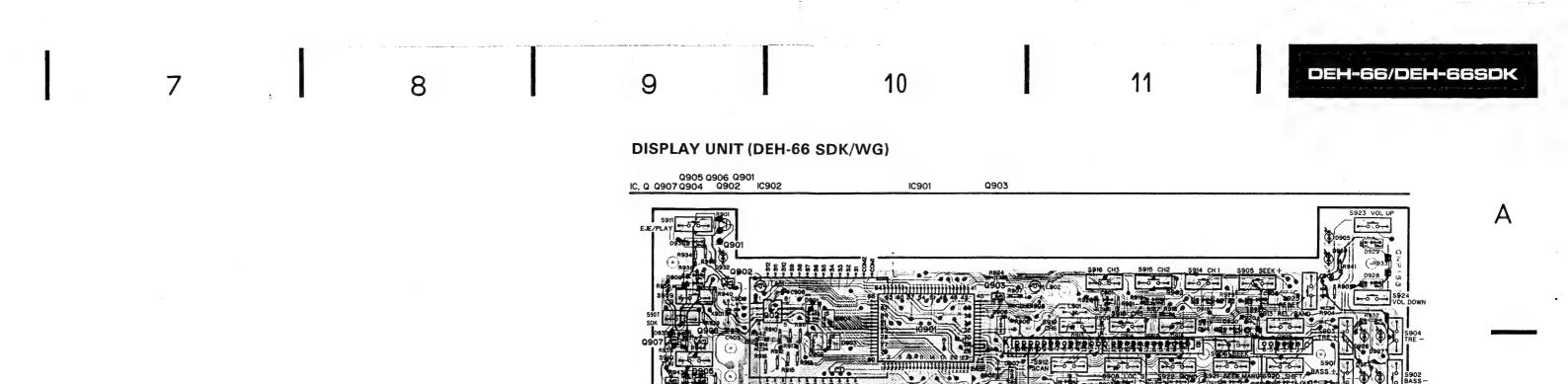
*IC751 : PD4136A

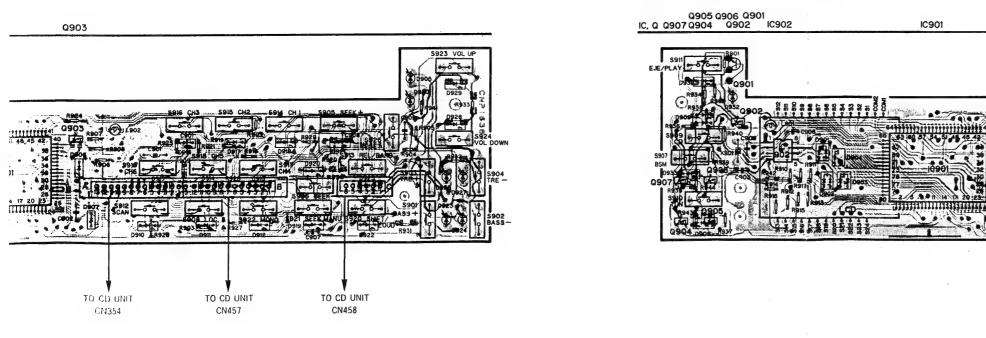


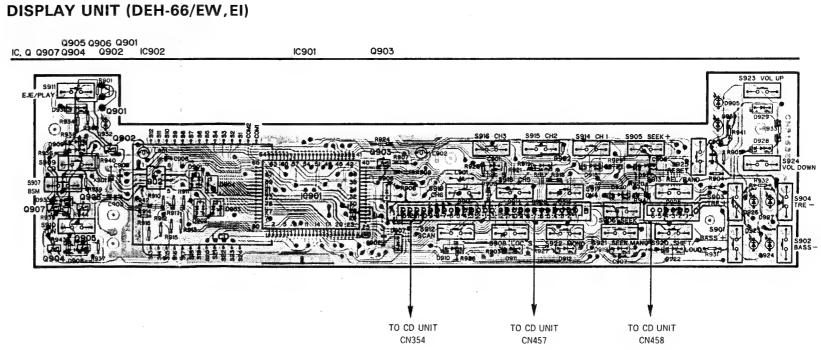
•Pin Functions (PD4136A)

Pin No.	Pin Name	I/0	Function and Operation	
1	DATA	CMOS IN	Serial data output	
2	CLK	CMOS OUT	Serial data clock output	
3	LOCK	CMOS IN	Spindle lock monitor "H"=Lock	
4	CRCF	CMOS IN	CRC check result input "H"=CRC OK	
5	SUBQ	CMOS IN	Sub-code data input	
6	TEST	CMOS IN	Test input	
7	RESET	CMOS IN	Reset input	
8	X 2	CMOS OUT	Oscillator output	
9	X 1	CMOS IN	Oscillator input	
1 0	BSRQ	CMOS OUT	Service request line "L"=Request	
1 7	C. LED	CMOS OUT	Output for LED	
2 3	VMC	CMOS OUT	Loading power supply control	
2 4	DSET	CMOS OUT	Disc set LED control	
2 5	C. POWER	CMOS OUT	Regulator ON/OFF control "H"=Regulator ON	
2 6	VSS		Ground	
2 8	DISC IN	CMOS IN	Door switch input "H"=Door open	









TO CD UNIT

CN354

TO CD UNIT

CN457

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CN458

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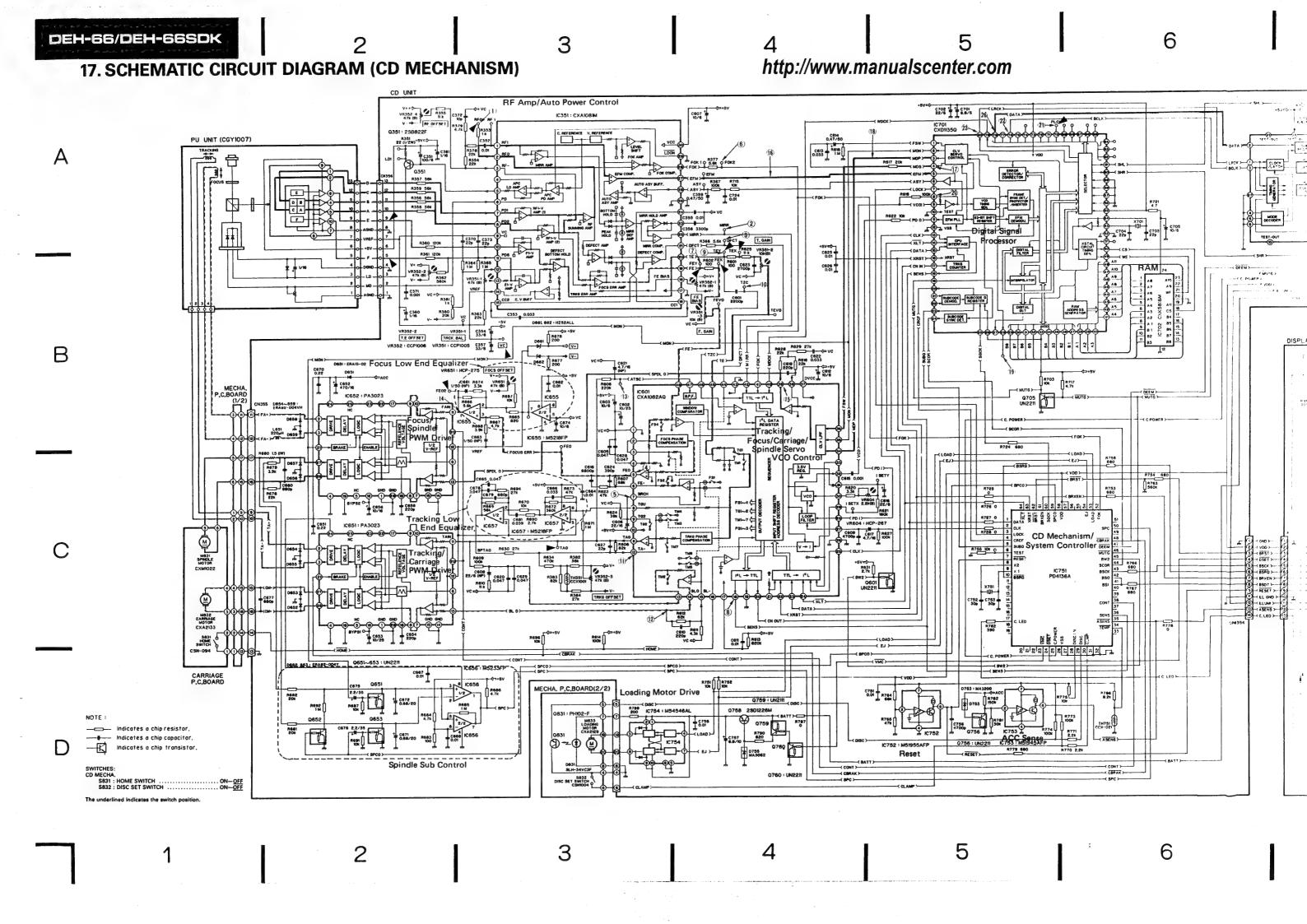
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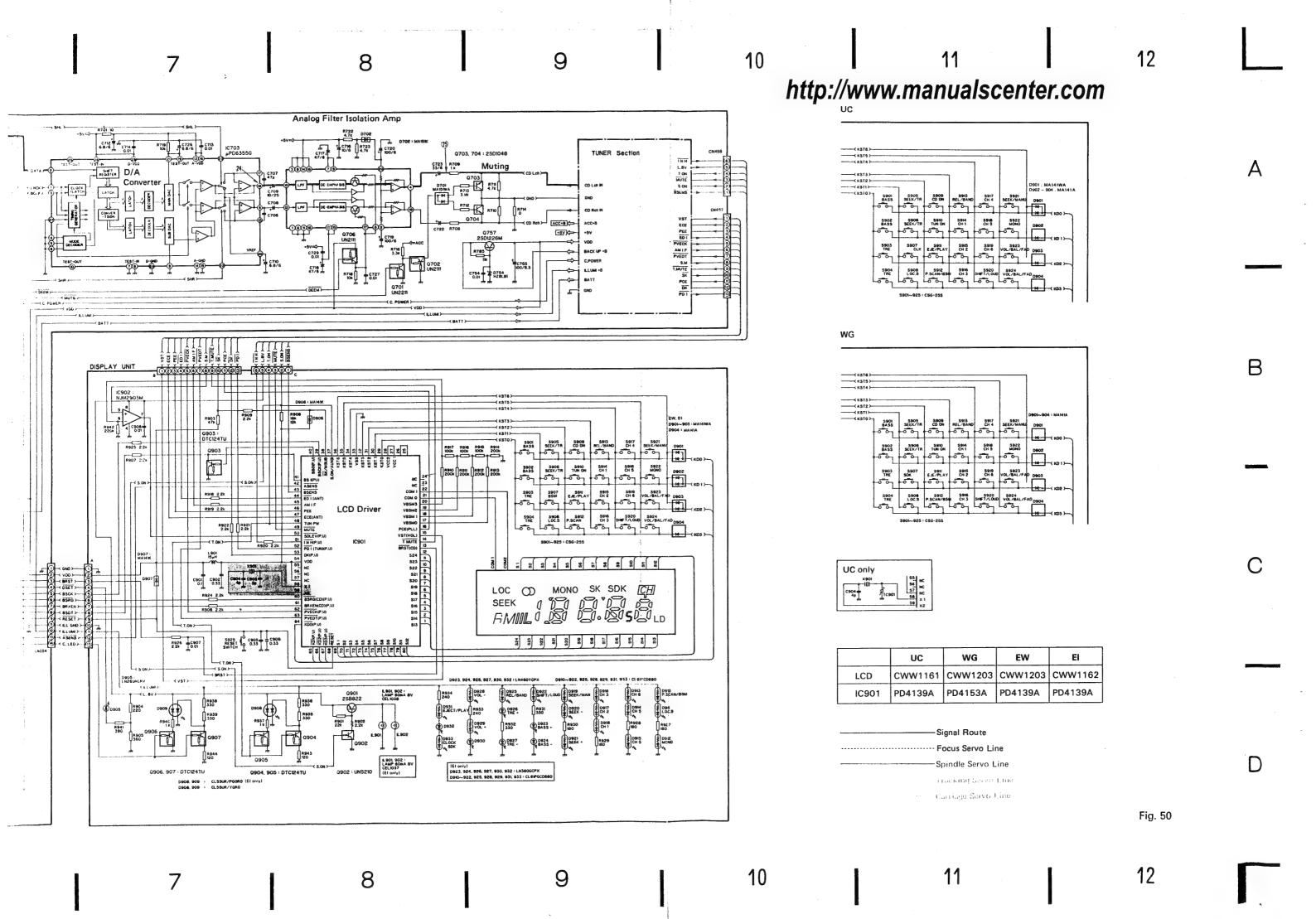
Fig. 51

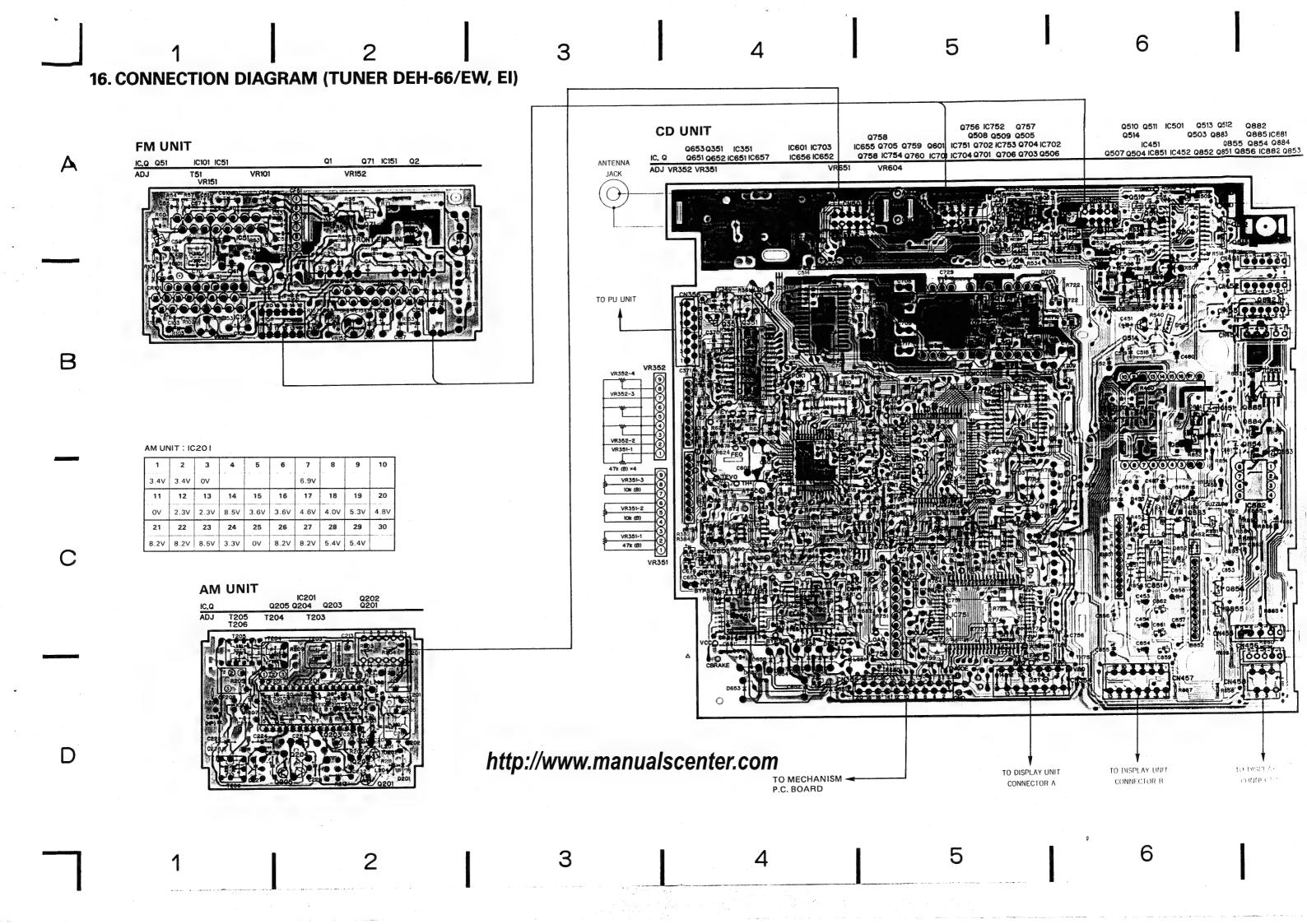
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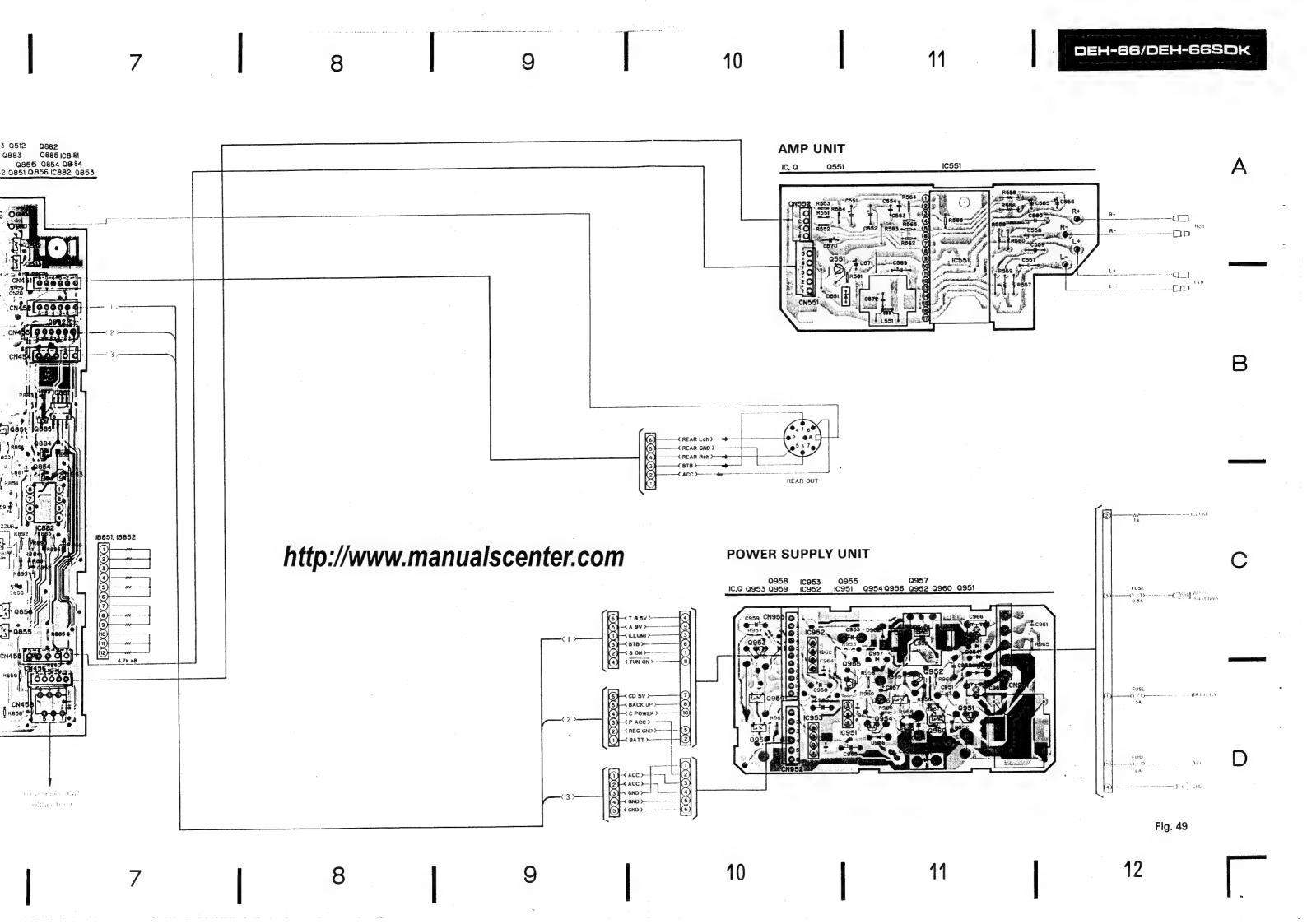
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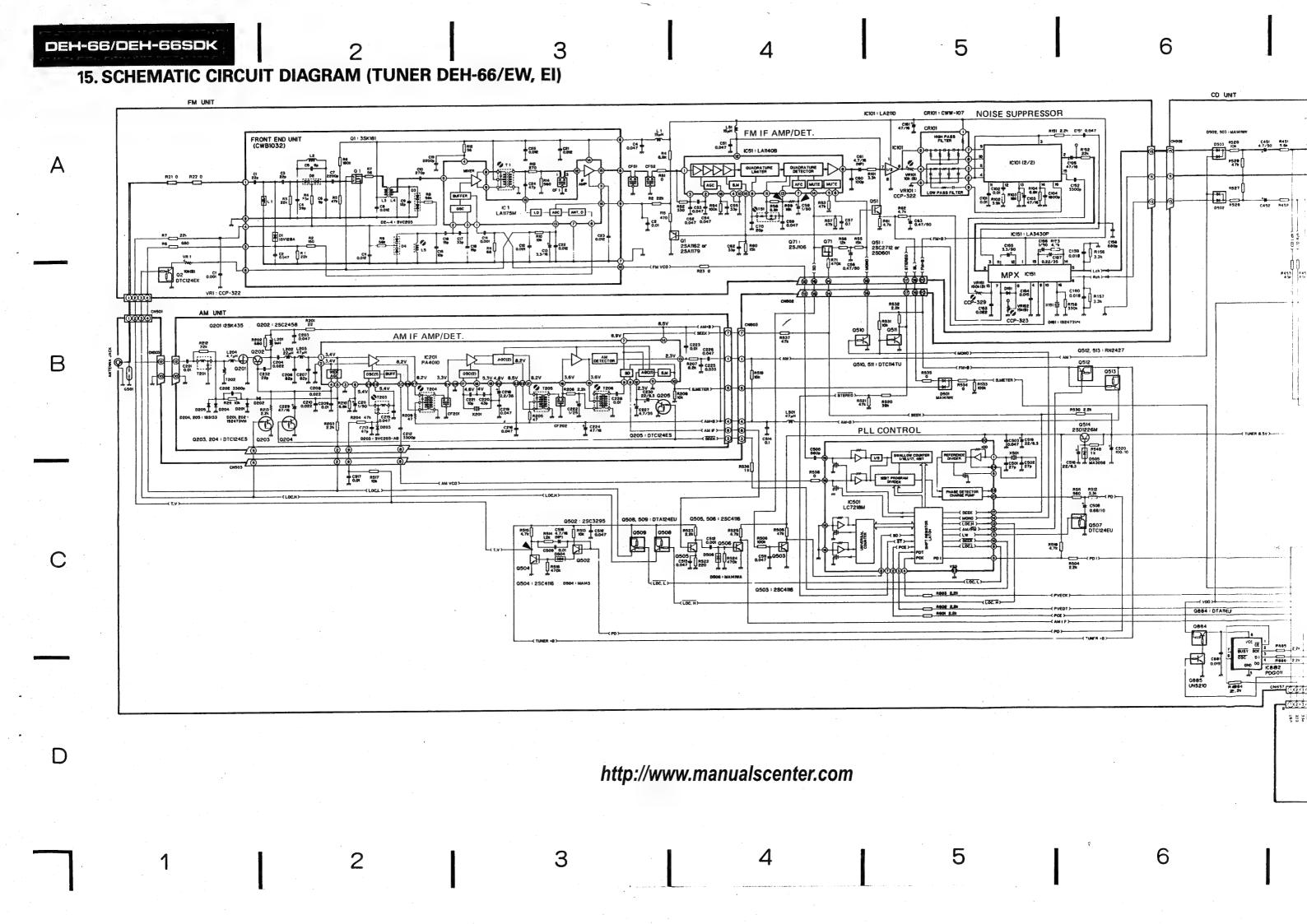
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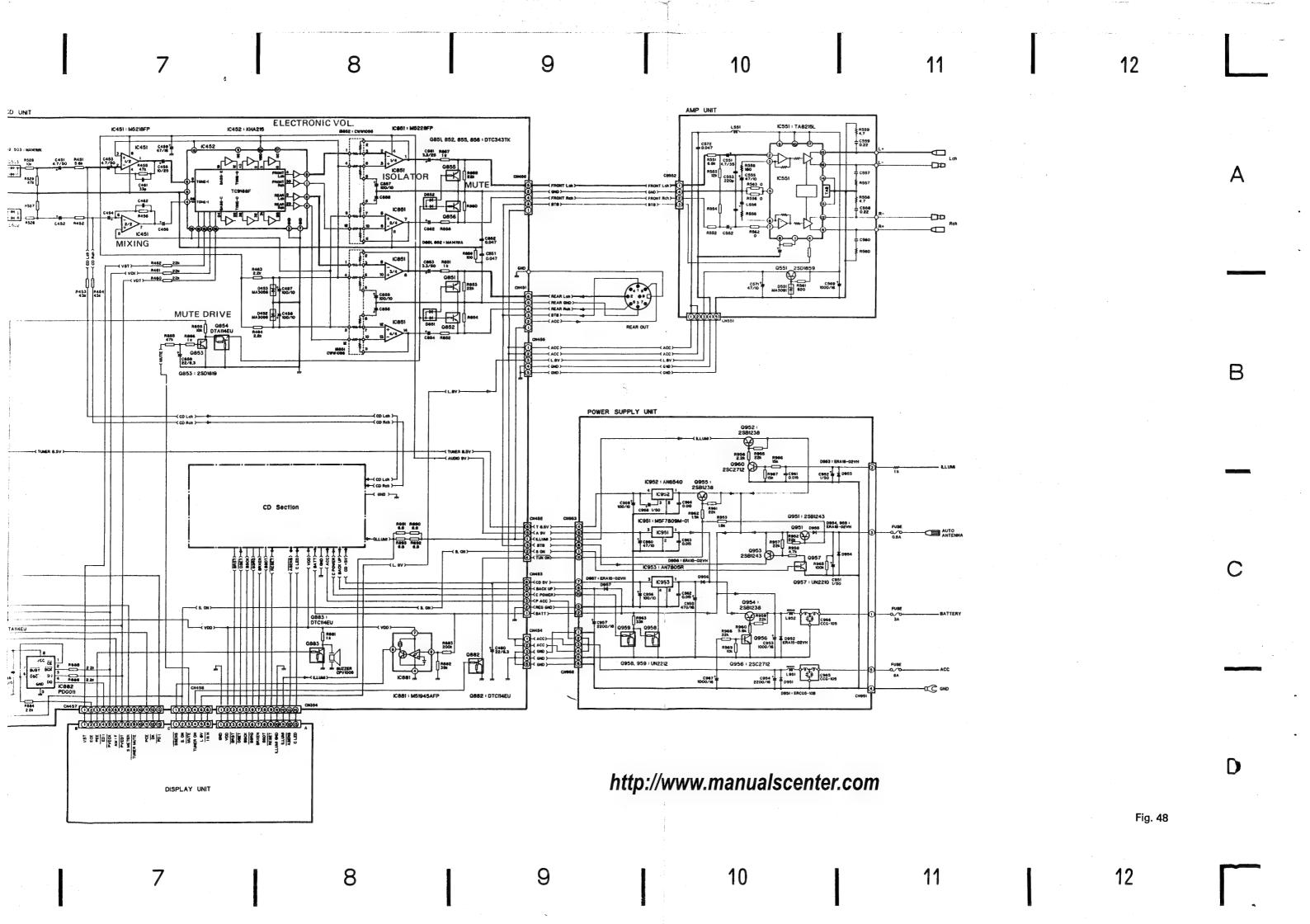


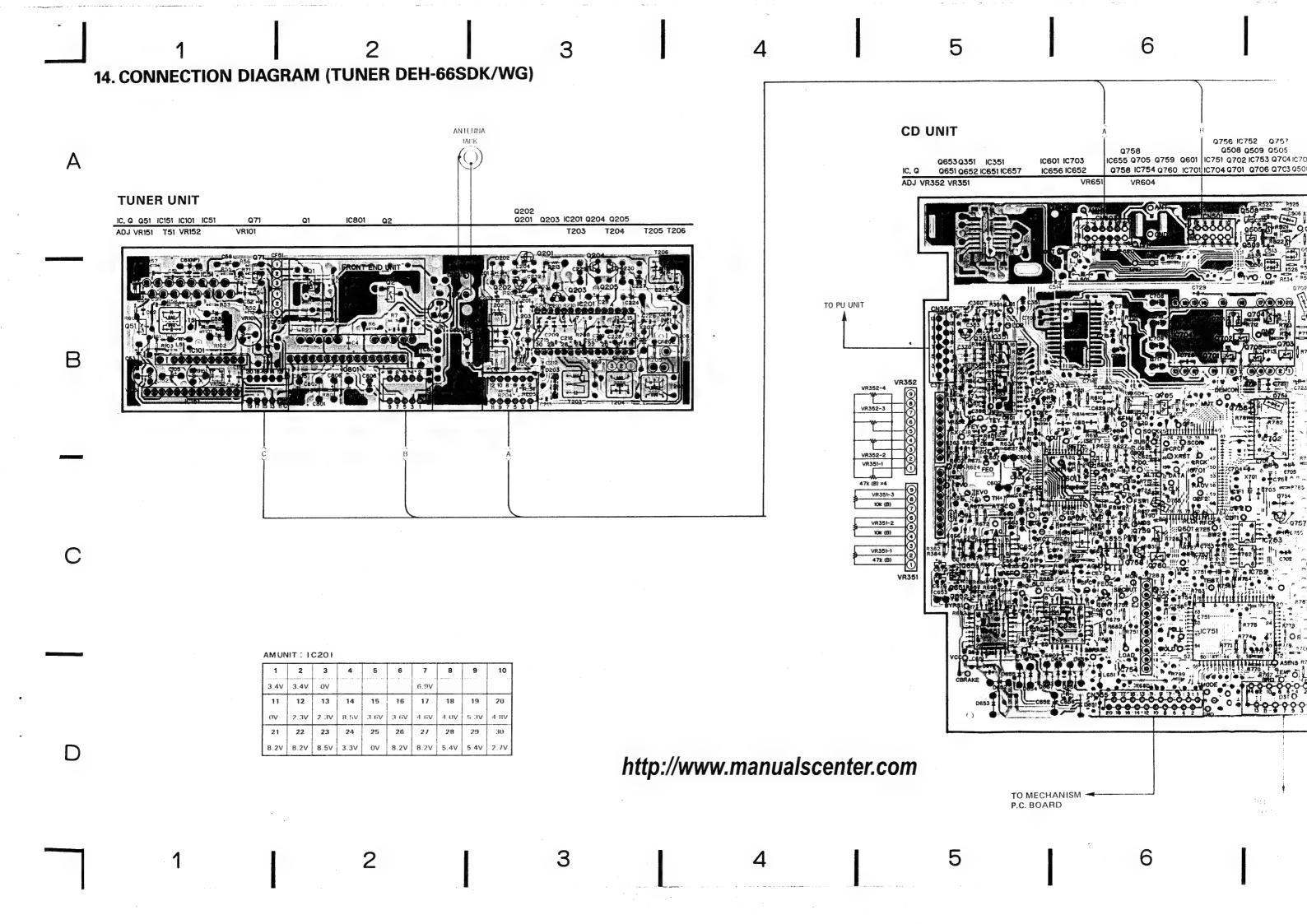


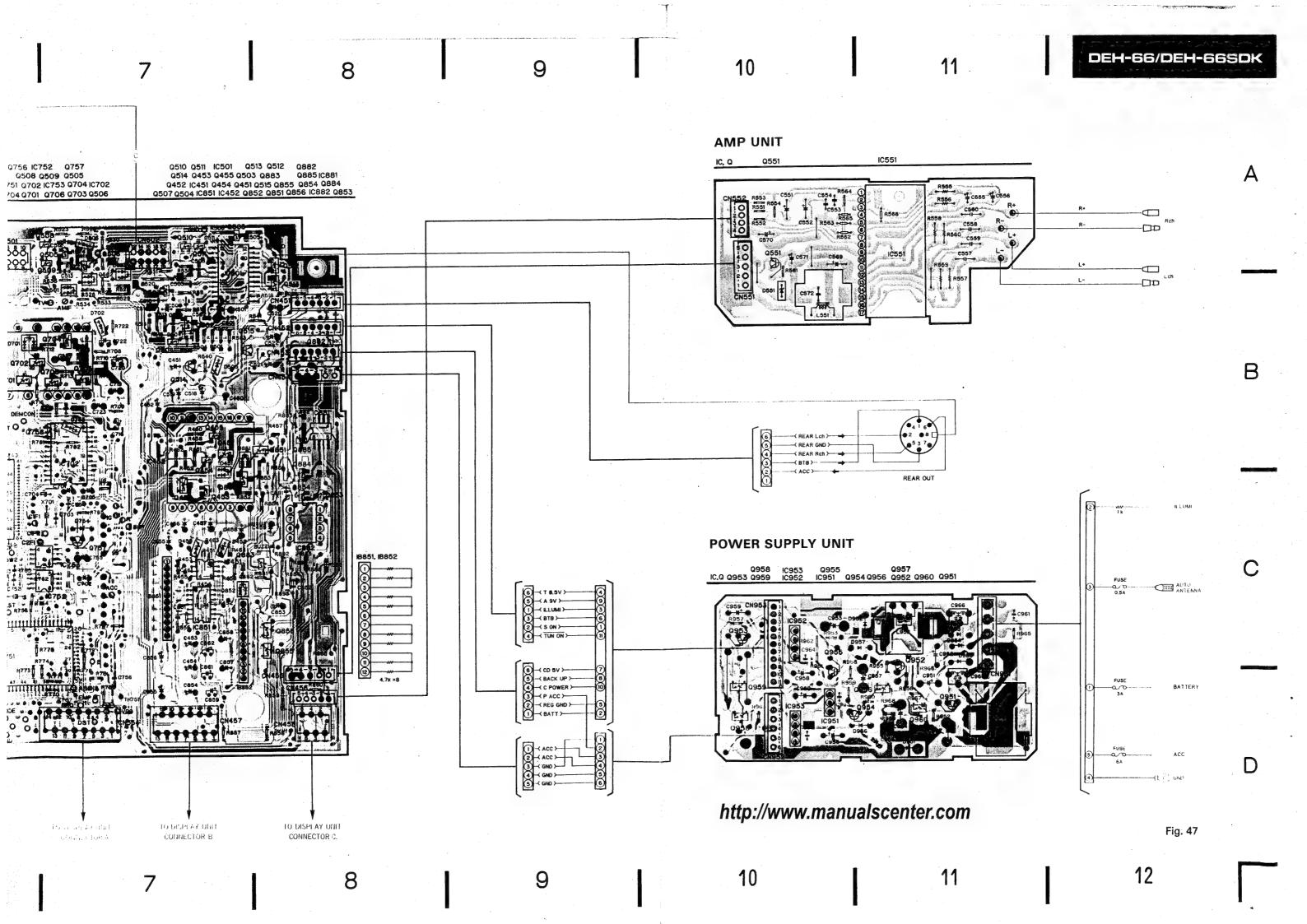


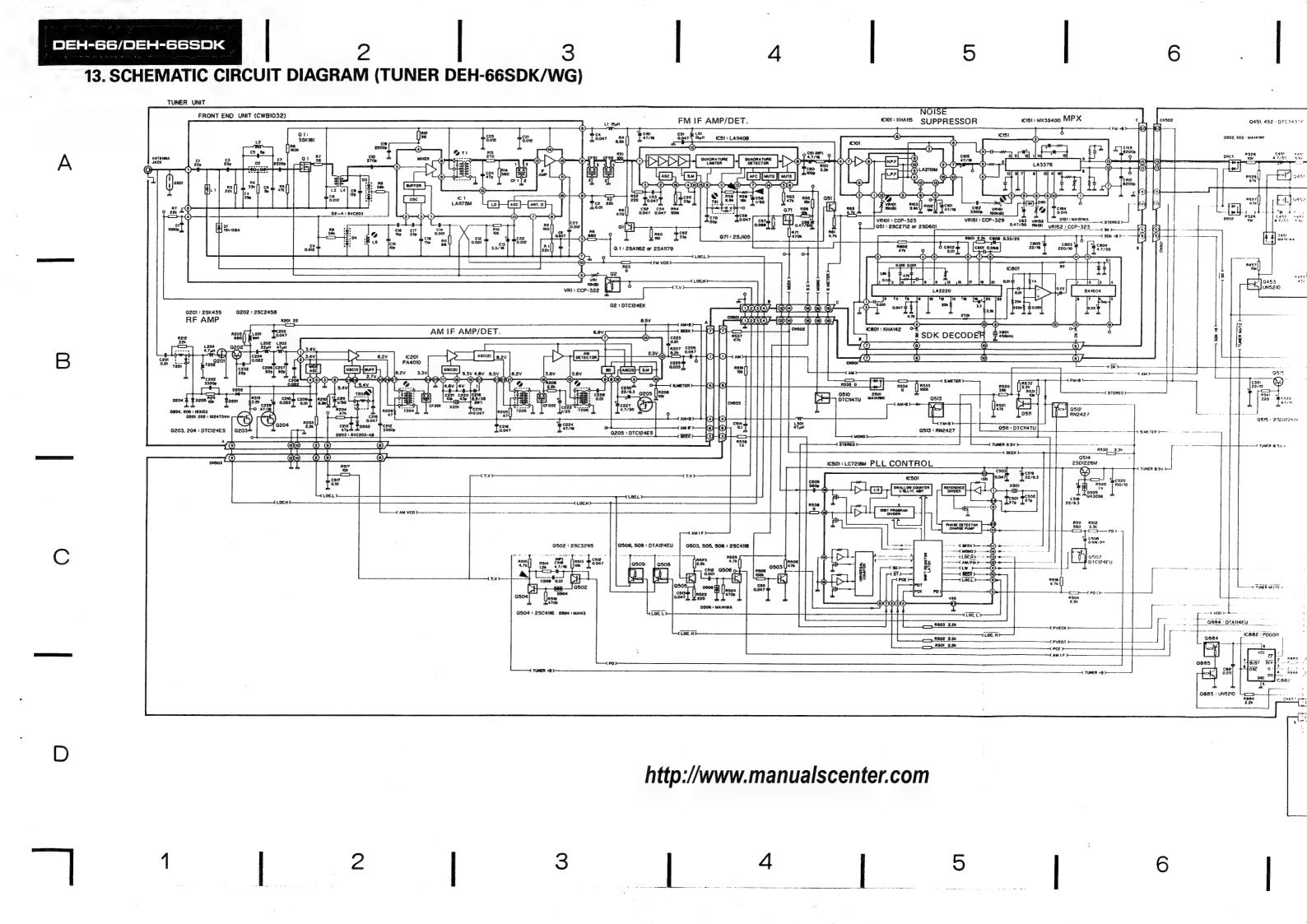


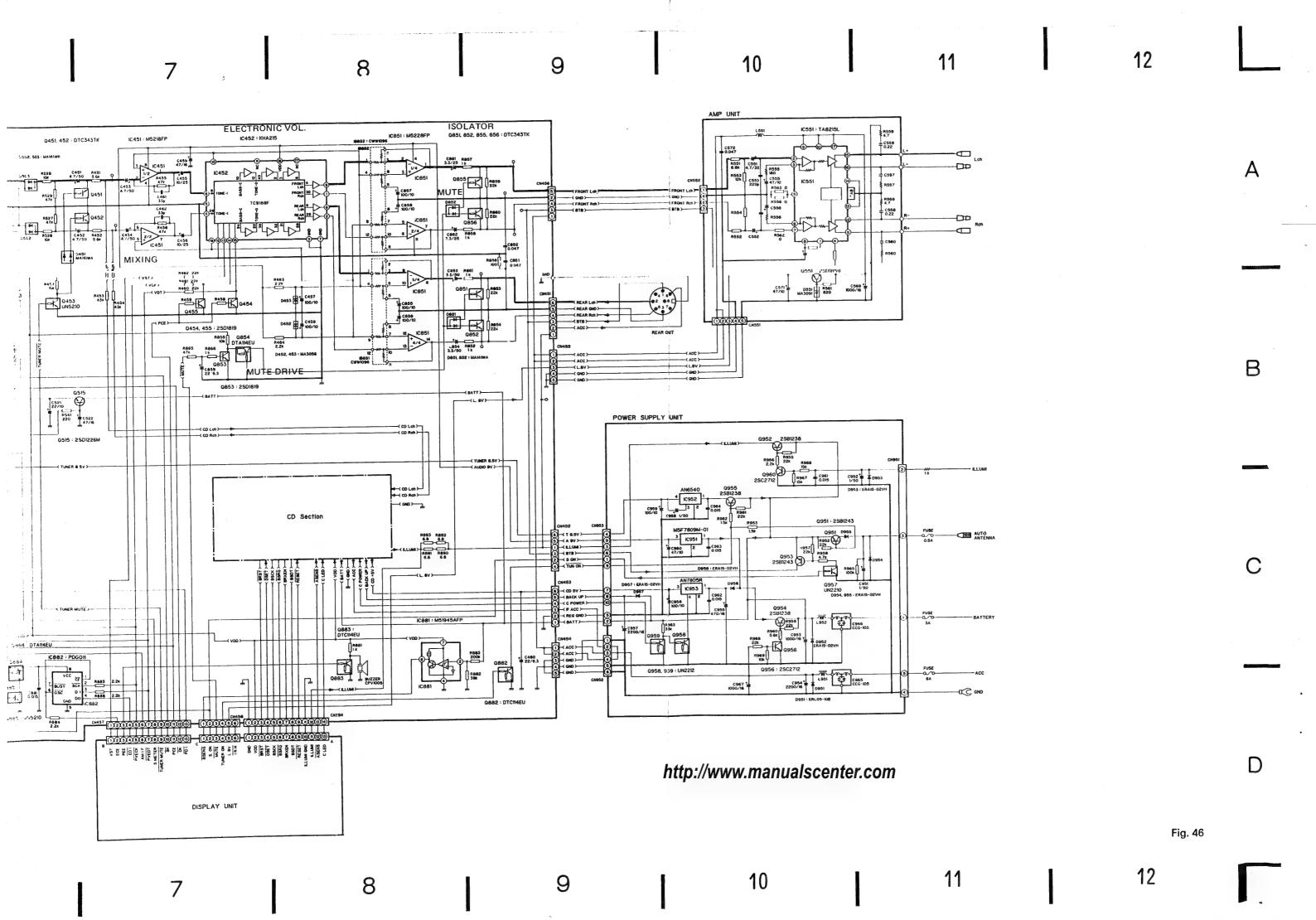


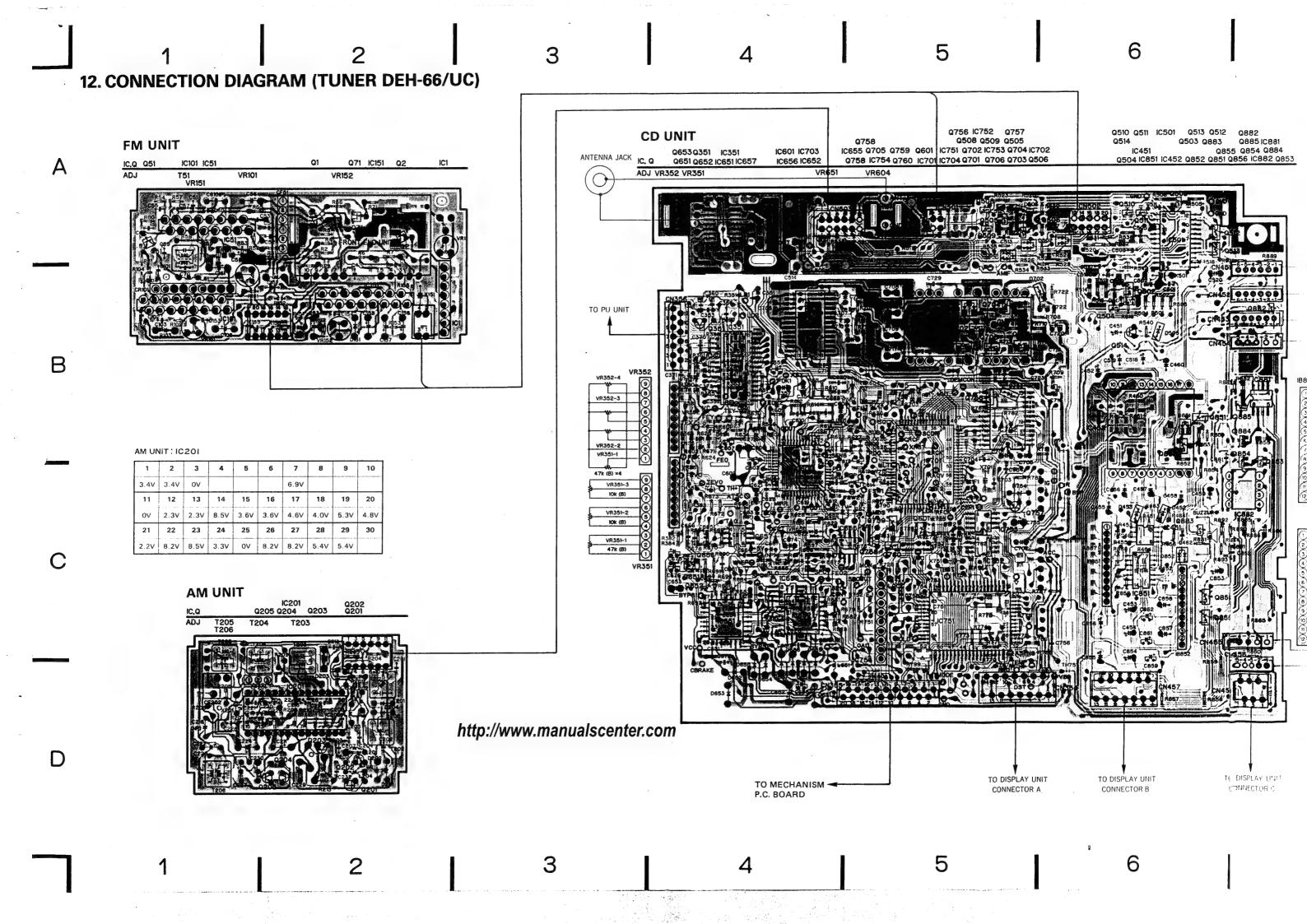


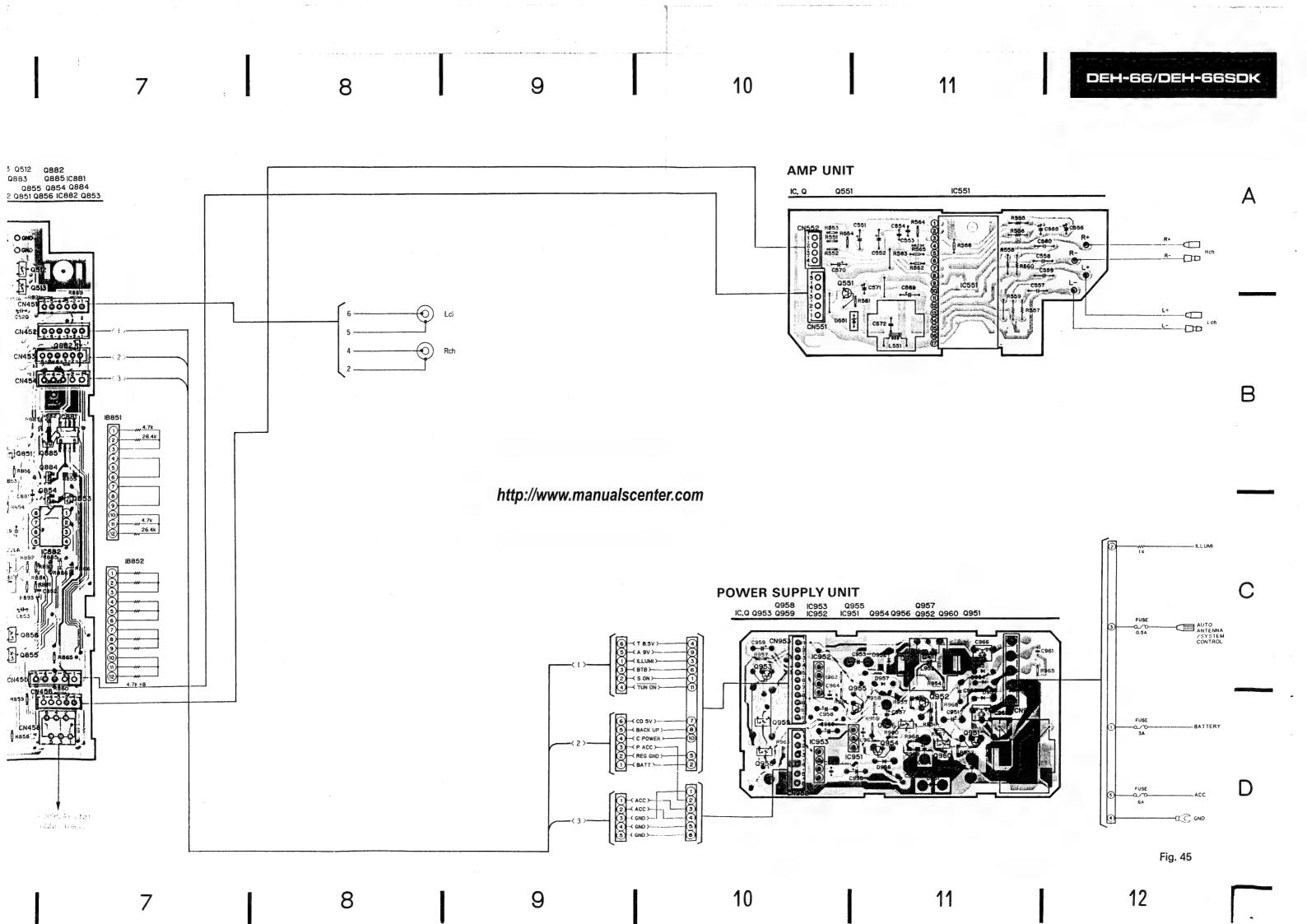


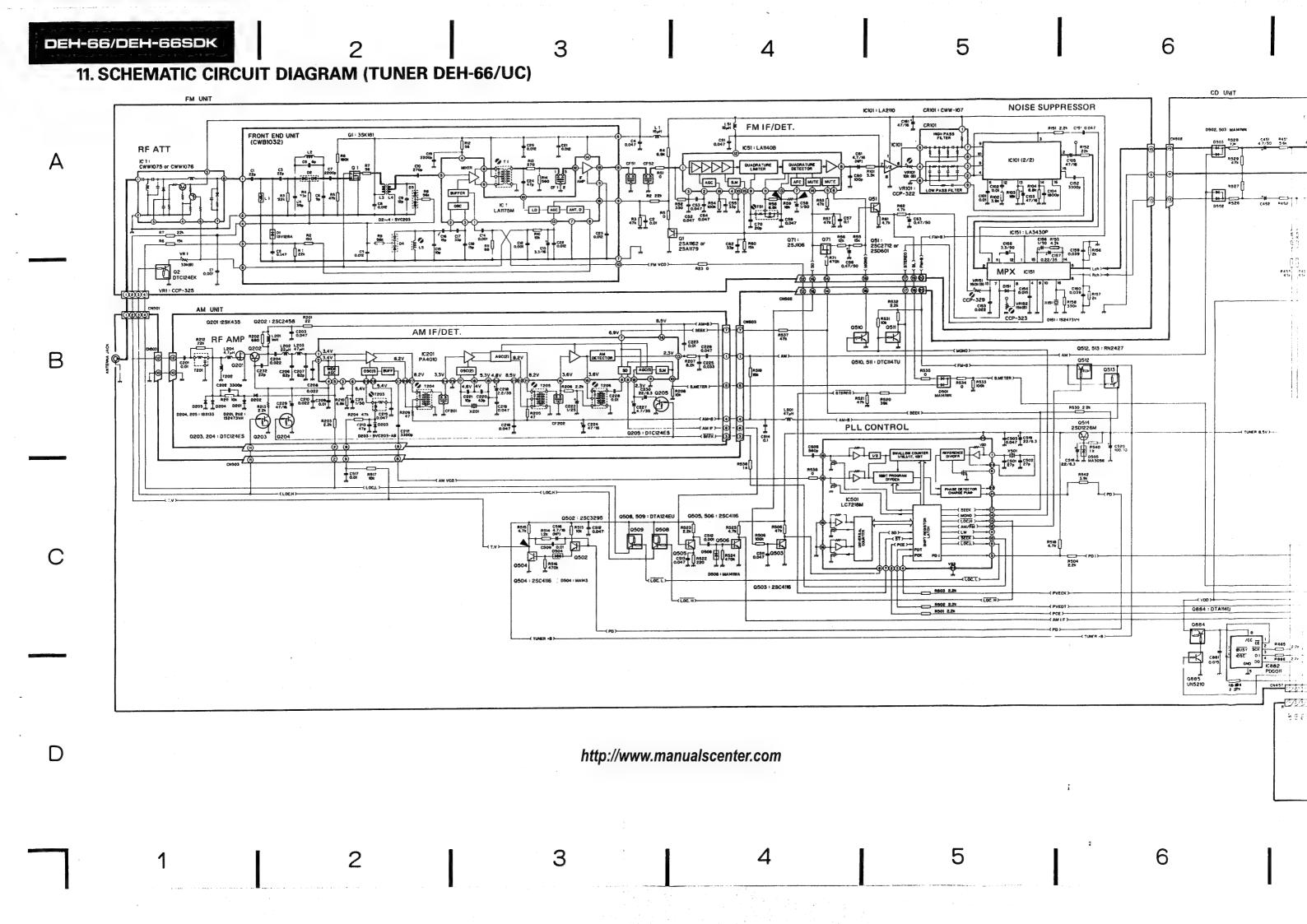


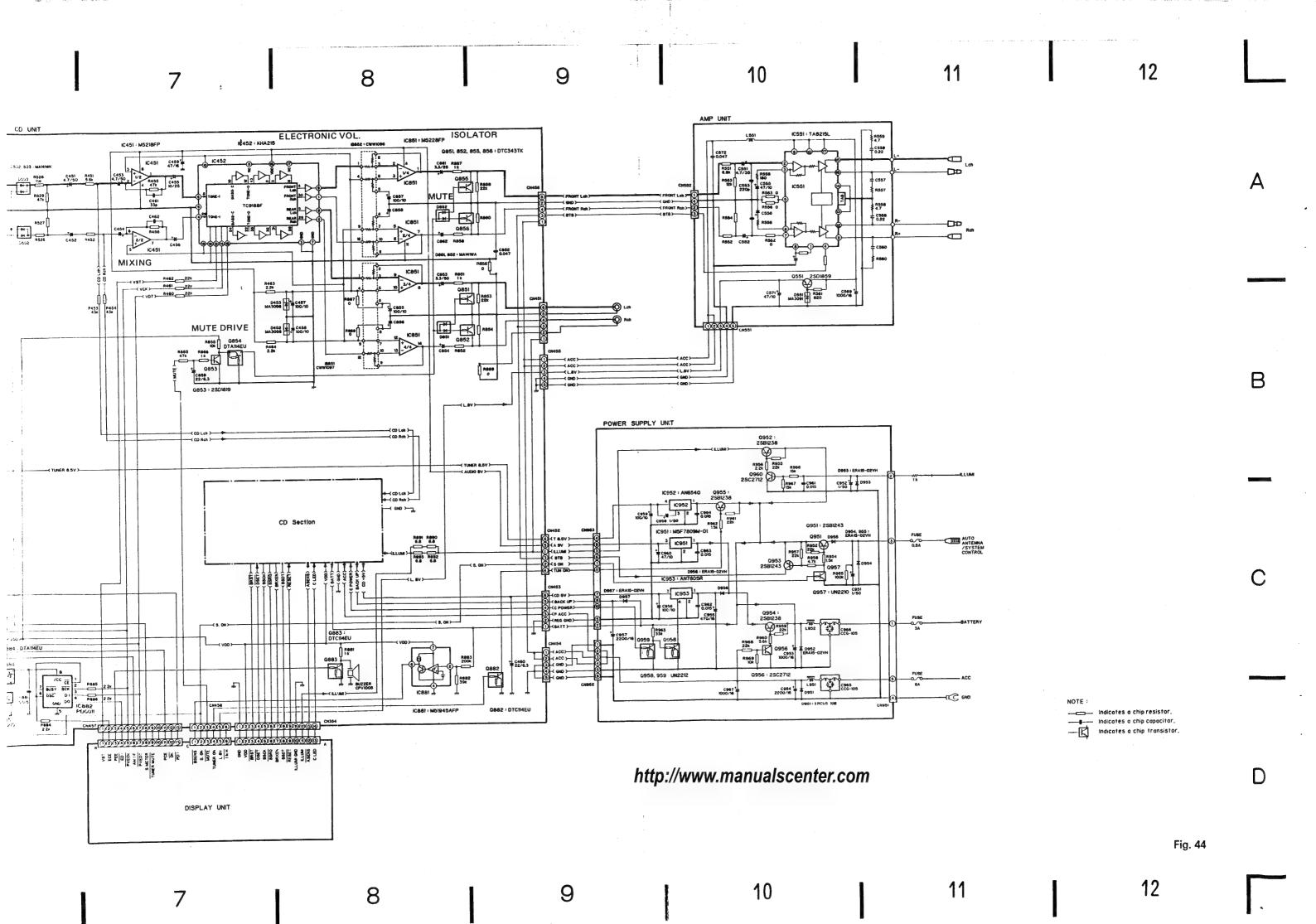










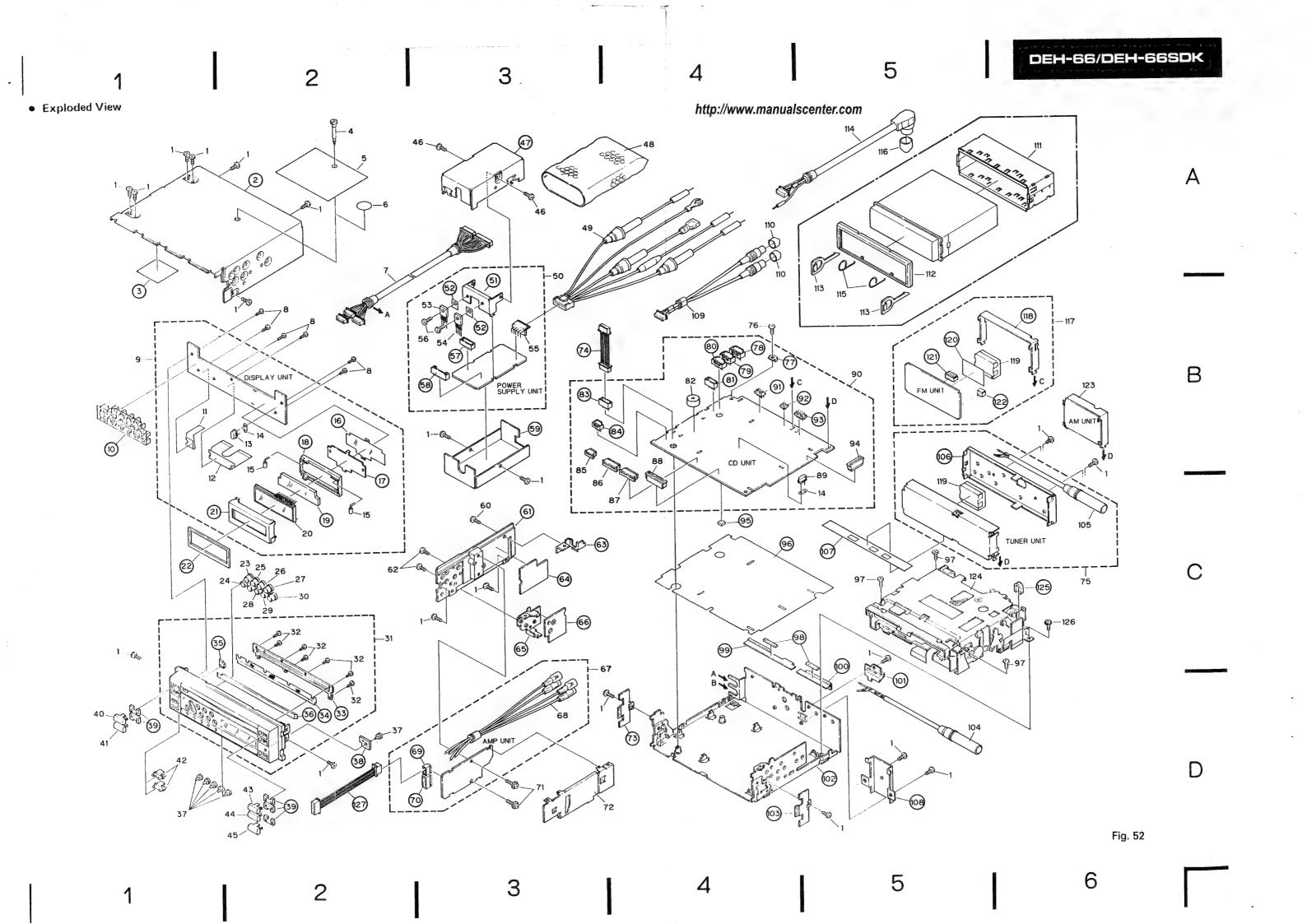


Mark	No.	Part No.	Description Plug	Mark	No. 93	Part No.	Description Plug	
	58 59 60 61 62 63	BMZ30P060FMC BMZ30P040FMC	Case Screw Heat Sink Screw Holder		94 95 96 97	CKS1328 BMZ26P040FMC	Connector Spacer Insulator Screw	А
•	64 65 66 67 68	CWH1056 CDE1771	Film Holder Film Amp Unit Cord		98 99 100 101 102		Cushion Plate Plate Plote Holder Chassis Unit(UC) Chassis Unit(WG, EW, EI)	
	69 70 71 72 73	PMS30P100FMC CNC1859	Plug Plug Screw Holder Side Cover		103 104 105 106 107	CDH1068 CDH1067	Side Cover Antenna Cable(UC,EW,EI) Antenna Cable(WG) Case Insulator(WG)	В
•	74 75 76 77	CWE1105 BMZ30P050FMC PMS30P050FMC	Connector Tuner Unit(WG) Screw(UC, EW, EI) Screw(WG) Holder(UC, EW, EI)		108 109 110 111 112	CDE1775 CNW-829 CNC1484 CNS1403	Bracket Cord(UC) Cap(UC) Holder Panel	
	78 79 80 81 82 83 84	CPV1005	Plug Connector Plug Plug Buzzer Plug Plug Plug	••	113 114 115 116 117	CNC1631 CDE1772 CBH-865 CNV1455 CWE1096 CWE1097	Holder Cord(WG, EW, EI) Spring Cap(WG, EW, EI) FM Unit(UC) FM Unit(EW, EI)	
	85 86 87 88 89	CKS1075 CKS1082 CKS1083 CKS1415 CSS1030	Connector Connector Connector Connector Xtal Resonator		118 119 120 121 122	CWB1032	Holder (UC, EW, EI) Front End Unit Insulator (UC, EW, EI) Connector (UC, EW, EI) Connector (UC, EW, EI)	С
	90 91 92	CWX1114 CWX1123 CWX1119	CD Unit(UC) CD Unit(WG) CD Unit(EW, EI) Plug Plug, 4P(UC, EW, EI) Plug, 10P(WG)	•	123 124 125 126 127	CWA1007 CXK2200 PMF26P060FMC	AM Unit(UC, EW, EI) CD Mechanism Unit Cushion Screw Connector	

D

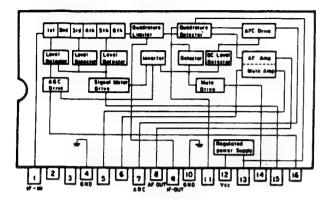
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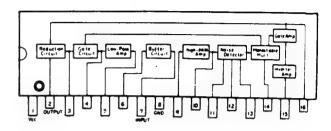


• FM Unit

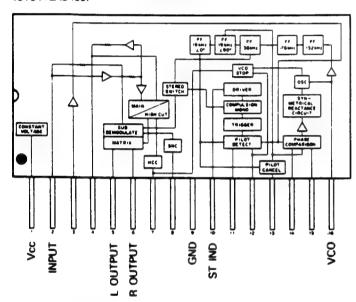
IC51:LA1140B



IC101:LA2110

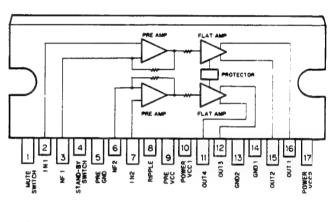


IC151:LA3430P



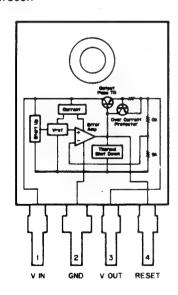
AMP Unit

IC551: TA8215L

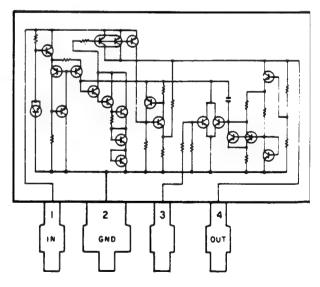


Power Supply Unit

IC953: AN7805R

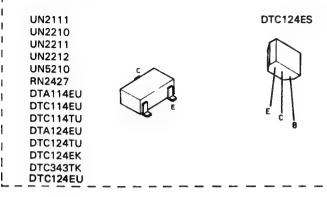


IC952: AN6540



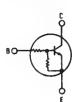
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ICs and Transistors

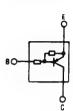


2SC2458

DTC124ES



DTA114EU DTA124EU RN2427 UN2111



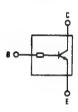
2SJ106 |



DTC124EU DTC124EK

DTC114EU

DTC114TU DTC124TU DTC343TK UN2210 UN5210



2SK435





2SB822F 2SB822



2SC3673

2SD1226M 2SD1859 2SB1243 2SB1238



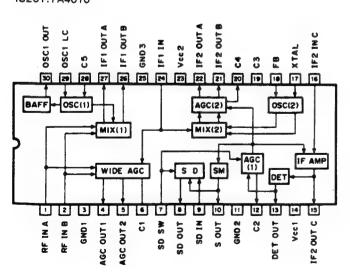
2SA1162 2SA1179 2SC2712 2SC3295 2SC4116 2SD601 2SD1048

2SD1819



AM Unit

IC201: PA4010



2SJ105

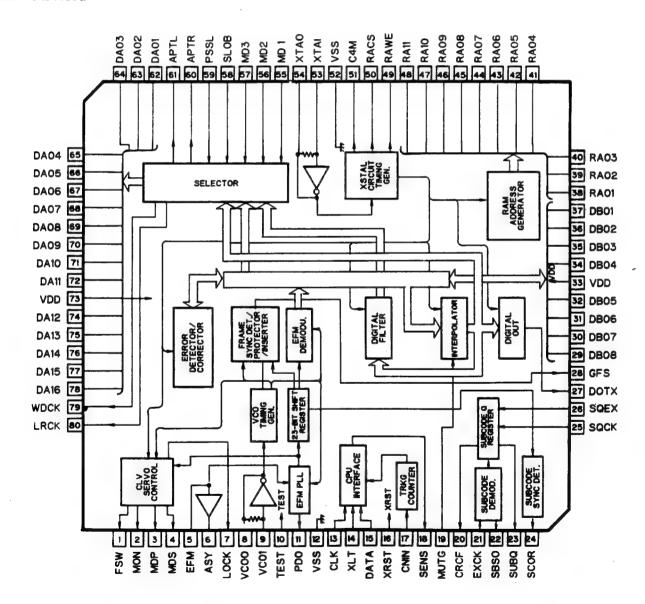


● Pin Functions (CXD1135Q)

Pin No.	Pin Name	1/0	Function and Operation		
1	FSW	Output	Spindle motor output filter time constant selector output		
2	MON	Output	Spindle motor ON/OFF control output		
3	MDP	Output	Spindle motor drive output - "rough" control in CLV-S mode, and phase control in CLV-P mode		
4	MDS	Output	Spindle motor drive output - speed control in CLV-P mode		
5	EFM	Input	EFM signal input from RF amplifier		
6	ASY	Output	EFM signal slice level control output		
7	LOCK	Output	Sampling of GFS signal by WFCK/16 - "H" output if "H", "L" output if "L" detected eight times in succession		
8	vcoo	Output	VCO output - f = 8.6436MHz when EFM signal is locked		
9	vcoi	Input	VCO input		
10	TEST	Input	(OV)		
11	PDO	Ouptut	EFM signal and VCO/2 phase comparison output		
12	Vss	-	Ground (OV)		
13	CLK	Input	Serial data transfer clock input from CPU - data latched by clock leading edge		
14	XLT	Input	Latch input from CPU - 8-bit shift register data (serial data from CPU) is latched in each register.		
15	DATA	Input	Serial data input from CPU		
16	XRST	Input	System reset signal input - reset when "L"		
17	CNIN	Input	Tracking pulse input		
18	SENS	Output	Output of internal status according to address		
19	MUTG	Input	Muting input - when ATTM of internal register A is "L", MUTG "L" denotes normal status, and "H" muted status		
20	CRCF	Output	Sub-code Q CRC check result output		
21	EXCK	Input	Clock input for sub-code serial output		
22	SBSO	Output	Sub-code serial output		
23	SUBQ	Output	Sub-code Q output		
24	SCOR	Output	Sub-code synchronizing S0+S1 output		
25	SQCK	Input/Output	Sub-code Q read clock		
26	SQEX	Input	SQCK selector input		
27	DOTX	Output	Digital out output (WFCK output)		
28	GFS	Output	Frame synchronizing lock status indicator output		
29	DB08	Input/Output	External RAM data pin - DATA8 (MSB)		
30	DB07	input/Output	External RAM data pin - DATA7		
31	DB06	Input/Output	External RAM data pin - DATA6		
32	DB05	Input/Output	External RAM data pin - DATA5		
33	V_{DD}	_	Power supply (+5V)		
34	DB04	Input/Output	External RAM data pin - DATA4		
35	DB03	input/Output	External RAM data pin - DATA3		

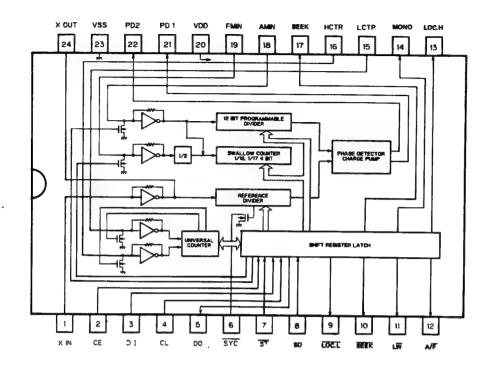
Pin No.	Pin Name	1/0	Function and Operation	
39	SPDLO	Output	Spindle drive output	
40	WDCK	Input	Auto-sequence clock input 176.4kHz	
41	FOK	Input	FOK signal input pin	
42	MIRR	Input	Mirror signal input pin	
43	DVEE		DGND connection	
44	DFCT	Input	DEFECT signal input pin - defect countermeasure circuit activated when this input is high	
45	TE	Input	Tracking error signal input pin	
46	TZC	Input	Tracking zero-cross comparator input pin	
47	ATSC	Input	Tracking lens offset detector window comparator input pin	
48	FE	Input	Focus error signal input pin	

*IC701: CXD1135Q

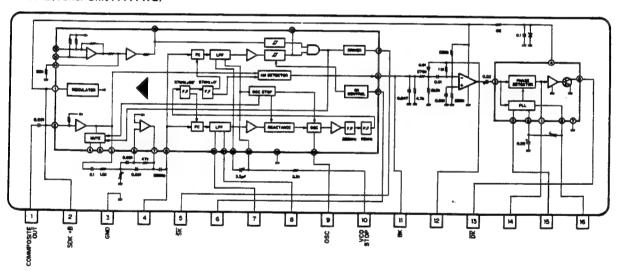


Pin No.	Pin Name	1/0	Function and Operation				
2 9	DISC	CMOS IN	Disc sensor input "H"=Disc loaded				
3 0	CLMP	CMOS IN	Disc clamped input "L"=Disc clamped				
3 4	TEMP	INPUT	High temperature detector	•			
3 5	ACENS	CMOS IN	ACC sens input	"L	=ACC ON		
3 6	SENS	CMOS IN	CD LSI internal status mo	oni tor	input		
3 8	CONT	CMOS OUT	PWM driver ON/OFF	"H"	'=ON		
4 1	BSI	CMOS IN	Bus data input				
4 2	BSO	CMOS OUT	Bus data output				
4 3	вѕск	IN/OUT	Bus serial clock		CMOS Inp	ut/Output	
4 4	SCOR	CMOS IN	Sub-code synchronization	input			
4 5	BW 2	OUTPUT	Spindle motor output filter time constant selection output Neutral resistivity N channel open drain				
4 6	MUTG	OUTPUT	Muting output	"L"	=Mute ON		
4.7	DEEM	OUTPUT	Emphasis selector output "H"=Emphasis ON Neutral resistivity N channel open drain				
4 8	CBRAK	OUTPUT	PWM driver brake control	"L"	=Brake ON		
5 0	SPC	CMOS IN	Spindle motor rpm indicat	or	"L"=Lo	w speed	
5 2	FOK	CMOS IN	Indication that focus is	closed	and RF i	nput is ac	tive
5 3	LOAD	OUTPUT	Moter drive output	LOAD	Н	L	Н
5 4	EJ		Mandan 1	EJ	L	Н	Н
			Neutral resistivity N channel open drain		Load	Eject	Stop
5 8	VDD						
5 9	SPCO	CMOS OUT	Spindle motor rpm sensor circuit ON/OFF				
6 0	SQCK	CMOS OUT	Sub-code clock				
6 1	BRXEN	CMOS OUT	Bus reception enable output "Hi-Z" = Reception enable				
6 2	BRST	CMOS IN	Bus reset				
6 3	XRST	CMOS OUT	CD LSI reset output "L"=Reset				
6 4	XLT	CMOS OUT	Serial data latch output				

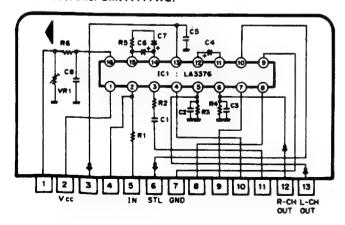
IC501 : LC7218M



KHA142(Tuner Unit WG)

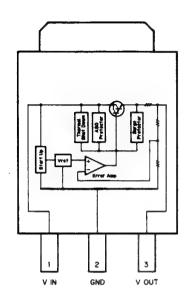


MX3S400(Tuner Unit WG)



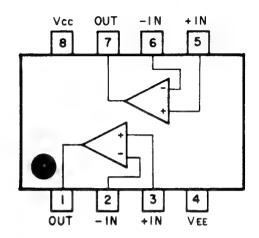
KHA115(Tuner Unit WG)

IC951: M5F7809M-01



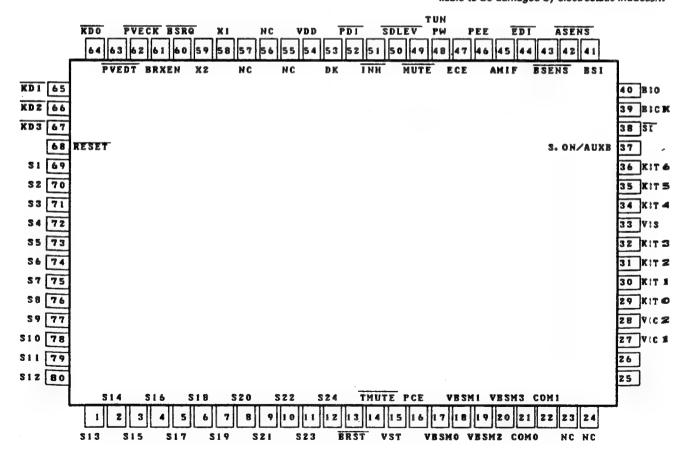
Display Unit

IC902:NJM2903M

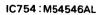


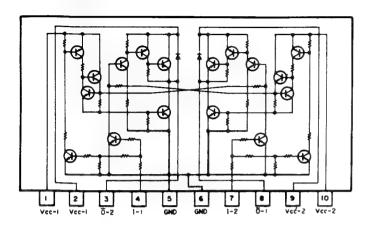
*1C901 : PD4139A(UC, EW, EI), PD4153A(WG)

IC's marked by * are MOS type. Be careful in handling them because they are very liable to be damaged by electrostatic induction.

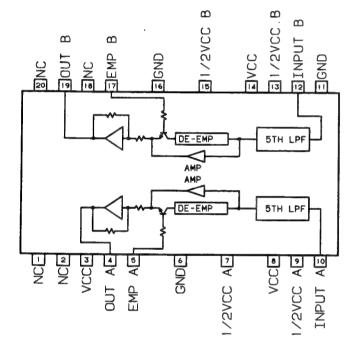


• CD Unit

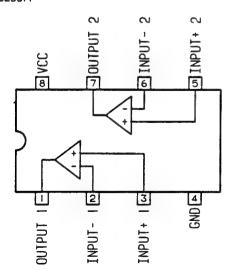


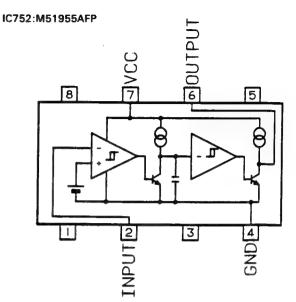


IC704: KHA220

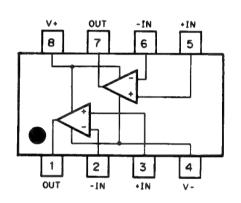


IC656:M5233FP

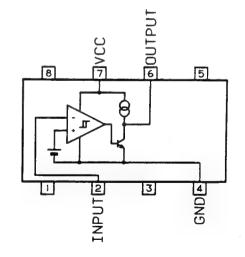


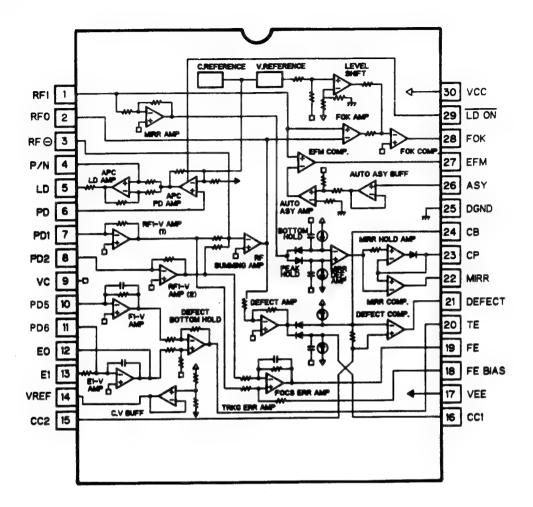


IC451,655,657:M5218FP



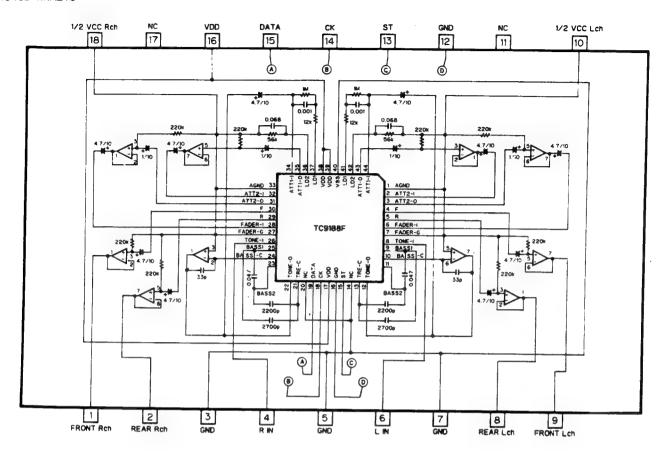
IC753,881:M51945AFP





● Pin Functions (CXA1081M)

Pin No.	Pin Name	1/0	Function and Operation		
1	RFI	Input	Input of capacitance-coupled RF summing amplifier output		
2	RFO	Output	RF summing amplifier output pin - eye pattern check point		
3	RF-	Input	RF summing amplifier feedback input pin		
4	P/N	Input	Laser diode P-sub/N-sub selector pin		
5	LD	Output	APC LD amplifier output pin		
6	PD	Input	APC PD amplifier input pin		
7	PD1	Input	RF I-V amplifier (1) inverter input pin - connected to photodiode A + C pin for current input		
8	PD2	Input	RF I-V amplifier (2) inverter input pin - connected to photodiode B+D pin for current input		
9	VC		Connected to VR		
10	F	Input	I-V amplifier inverter input pin - connected to photodiode for current input		
11	E	Input	I-V amplifier inverter input pin - connected to photodiode for current input		
12	EO	Output	E I-V amplifier output pin		
13	EI	input	E I-V amplifier feedback input pin for E I-V amplifier gain adjustment		
14	VR	Output	(V _{CC} + V _{EE})/2 DC voltage output pin		
15	CC2	Input	Input of capacitance-coupled DEFECT bottom hold output		
16	CC1	Output	DEFECT bottom hold output pin		
17	VEE		Ground connection		
18	FE BIAS	Input	Focus error amplifier non-inverting bias pin Used in focus error amplifier CMR adjustment		
19	FE	Output	Focus error amplifier output pin		
20	TE	Output	Tracking error amplifier output pin		
21	DEFECT	Output	DEFECT comparator output pin		
22	MIRR	Output	MIRR comparator output pin		
23	СР	Input	MIRR hold capacitor connector pin - MIRR comparator non-inverting input pin		
24	CB	Input	DEFECT bottom hold capacitor connector pin		
25	DGND		Ground connection		
26	ASY	Input	Auto asymmetry control input pin		
27	EFM	Output	EFM comparator output pin		
28	FOK	Output	Focus OK comparator output pin		
29	LDON	Input	Laser diode ON/OFF switching		
30	VCC		Positive power supply pin		

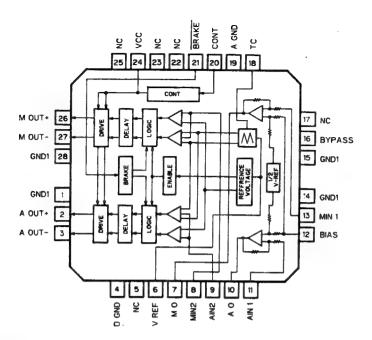


IC1(FM Unit. UC only)

CWW1075
(CWW1076)

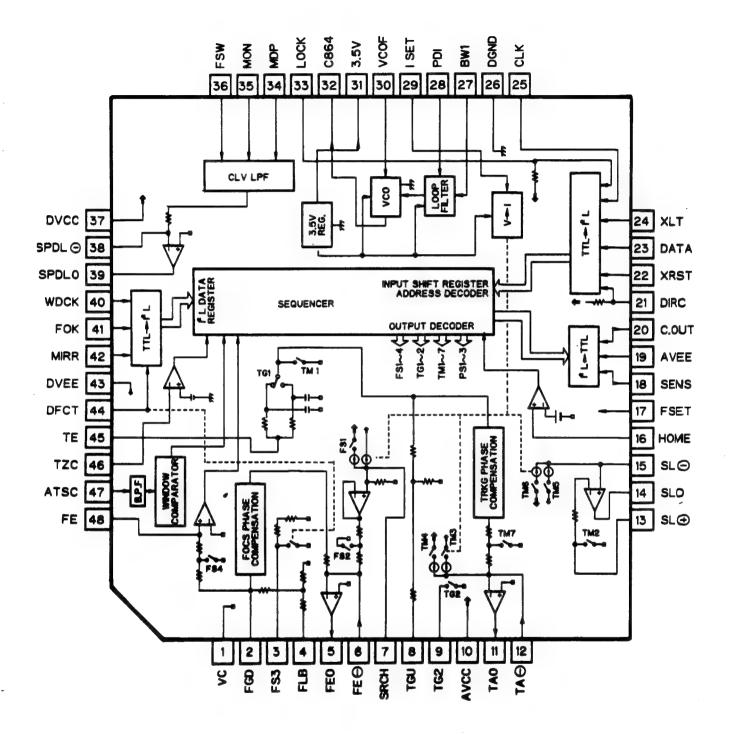
100X

IC651,652:PA3023



Pin Functioons (PA3023)

Pin	Pin Name	1/0	Function and Operation		
1	GND1	-	Sub GND.		
2	AOUT +	Output	Positive actuator drive output.		
3	AOUT -	Output	Negative actuator drive output.		
4	DGND	-	Power stage GND.		
5	NC	_			
6	Vref	-	IC stabilizing reference voltage output.		
7	МО	Output	Analog signal output for motor.		
8	MIN2	input	Analog signal input 2 for motor.		
9	AIN2	Input	Analog signal input 2 for the actuator.		
10	AO	Output	Analog signal output for the actuator.		
11	AIN1	Input	Analog signal input 1 for the actuator.		
12	BIAS	_	External bias input pin.		
13	MIN1	Input	Analog signal input 1 for the motor.		
14	GND1	_	Sub GND.		
15	GND1	-	Sub GND.		
16	BYPASS	_	Ripple filter condensor connection pin for IC stabilizing reference voltage.		
17	NC .	_			
18	TC	_	Condenser connection pin for obtaining triangle waveform.		
19	AGND	-	Small signal GND.		
20	CONT	Input	Circuit operation/standby switch input. Active H		
21	BRAKE	Input	Motor operation/non-operation switch input. Active L		
22	NC	_			
23	NC	_			
24	Vcc		ACC power supply.		
25	NC	_			
26	MOUT +	Output	Positive motor driver output.		
27	MOUT -	Output	Negative motor driver output.		
28	GND1	_	Sub GND		



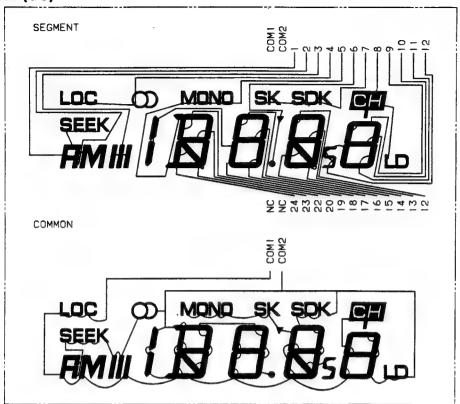
● Pin Functions (CXA1082AQ)

Pin No.	Pin Name	1/0	Function and Operation		
1	vc		Servo reference voltage input pin		
2	FGD		Connect to pin 3 to switch focus servo OFF when defect occurs		
3	FS3		Internal DFCT switch closed when pin 44 is high		
4	FLB		Focus servo low region boost external time constant pin		
5	FEO	Output	Focus drive output - connect to low-end equalizer		
6	FE-	Input	Focus amplifier inverter input pin		
7	SRCH		Focus search waveform generation external time constant connector pin		
8	TGU	Output	Tracking low-end equalizer connection output pin		
9	TG2		Pin 7 discharge switch for starting focus search from lens center		
10	AVCC		+ 5V connection		
11	TAO	Output	Tracking drive output		
12	TA-	input	Tracking amplifier inverter input pin		
13	SL+	Input	Sled amplifier non-inverting input pin		
14	SLO	Output	Sled drive output		
15	SL-	Input	Sled amplifier inverter input pin		
16	HOME	Input	Sled home position detector switch input pin		
17	FSET		Focus/tracking phase compensation peak and CLV low-pass filter fo setting pin		
18	SENS	Output	Output of FZC, AS, TZC, SSTOP, and BUSY depending on command from CPU		
19	AVEE		AGND connection		
20	COUT	Output	Track counter signal output		
21	DIRC		Not used		
22	XRST	Input	Reset input pin - reset when "L"		
23	DATA	Input	Serial data input from CPU		
24	XLT	Input	Latch input from CPU		
25	CLK	Input	Serial data transfer clock input from CPU		
26	DGND		DGND connection		
27	BW1		Loop filter external time constant pin		
28	PDI	Input	Input of CXD1135 phase comparator output PDO		
29	ISET		Current which determines focus search, track jump, and sled kick height		
30	VCOF		VCO free-running frequency more or less inversely		
31	3.5V	Output	Proportional to resistance value between pins 30 and 31		
32	C864	Output	8.64MHz VCO output pin		
33	LOCK		Not used		
34	MDP		Connect to MDP pin of CXD1135		
35	MON		Connect to MON pin of CXD1135		
36	FSW		CLV servo error signal low-pass filter external time constant pin		
37	DVCC		+ 5V connection		
38	SPDL -	Input	Spindle drive amplifier inverter input pin		

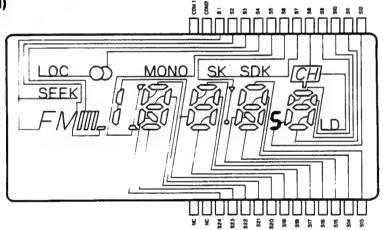
Circuit Diagram Symbols

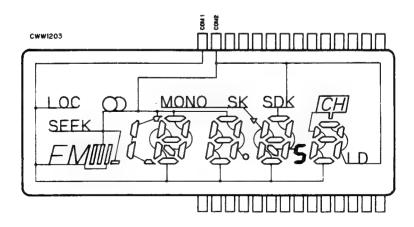
Symbol	Function	Symbol	Function		
Α	1/4 division detector output used in detection of	FEO2	Focus 2 (IC655 pin no.7)		
	RF and focus signal	FLOAT	Carriage mechanism play position detector signal		
ACC	14.4V	HOME	Home position detector signal (pick-up at home		
AGND	Analog ground	10.14	position when "L")		
ASY	Asymmetry	IN1	Motor control signal 1		
ATSC	Anti-shock (carriage motor control during playback)	IN2	Motor control signal 2		
В	1/4 division detector output used in detection of RF and focus signal	IN3	Motor control signal 3		
BATT	14.4V (Constant power supply)	ISETY	ISET resistance pin (IC601 pin no.31)		
BDATA -	Bus data signal	LAMP	Photo-interrupter drive signal		
BRST	Bus reset signal	LD	Laser diode		
BRXEN		LOAD	Magazine loading power supply ON/OFF signal		
BSCK	Bus line busy signal	MON	Motor ON (spindle forward or reverse when "H")		
	Bus synchronizing shift clock	MAG	Magazine detector signal		
BSRQ	Bus service request line	MD	Monitor diode		
BYPASS1	Bypass 1 (non-drive enabled by connecting to ground during PWM IC651 operation)	MUTG	Mute signal (muting ON when "L")		
BYPASS2	Bypass 2 (non-drive enabled by connecting to	POWER	Power supply control signal		
	ground during PWM IC652 operation)	REG5	+5V		
С	1/4 division detector output used in detection of	SLO	Carriage output signal (IC601 pin no.14)		
	RF and focus signal	SM+	Spindle motor drive signals (PWM OUT)		
CBRAKE	PWM driver brake control signal (brake on when "L")	SM-			
CLAMP+	Clamp motor drive signals	SPC	Spindle motor rpm detector signal (low speed when "L", IC656 pin nos.1 & 7)		
CLAMP-		SPCO	Spindle brake (spindle brake when "H", IC751		
CM+	Carriage motor drive signal (PWM OUT)		pin no. 59)		
CM-		SPDLO	Spindle motor error signal (IC601 pin no.39)		
CONT	PWM driver ON/OFF signal (ON when "H")	SPTAO	Tracking side path signal output		
D	1/4 division detector output used in detection of	SMIN	Spindle motor drive PWM input signal		
	RF and focus signal	STBY	Standby position detector signal		
DEEM	Emphasis selector switch (emphasis ON when "H")	TA+	Tracking actuator drive signals (PWM OUT)		
DFCT	DEFECT signal ("'H" when defect)	TA-			
DGND	Digital ground	TAIN	Tracking actuator drive PWM input signal		
DISC	Disc presence detector signal	TEND	Mechanism clamped switching line		
E	Tracking signal start detector	TGU	Tracking side path input		
EFM	8-14 modulation	TIN	Tray position detector signal (tray housed when		
EJ	Eject key		"L")		
EJP	Magazine position detector signal (eject position	TIG	Switch ground		
FIV.	when "L")	TOG	Switch ground		
ELV +	Elevation motor drive signals	TOUT	Tray position detector signal (tray ejectedwhen "H")		
END	Carriage mechanism END position detector signal	TRAY+	Tray motor drive signals		
F	Tracking signal end detector	TRAY-			
<u>'</u> FA+	Focus actuator drive signal (PWM OUT)	TSEL	Magazine position detector signal		
FA-	- Total States Silve Signal (1 11111 901)	TZC	T.E zero-cross signal		
FAIN	Focus drive PWM input signal	VC	Signal reference voltage (2.5V)		
FEO	Focus signal output (IC601, CXA1082AQ pin no.5)	VREF	Signal reference voltage buffer output (2.1V)		

• LCD : CWW1161 (UC)



• LCD : CWW1203 (WG, EW) CWW1162 (EI)



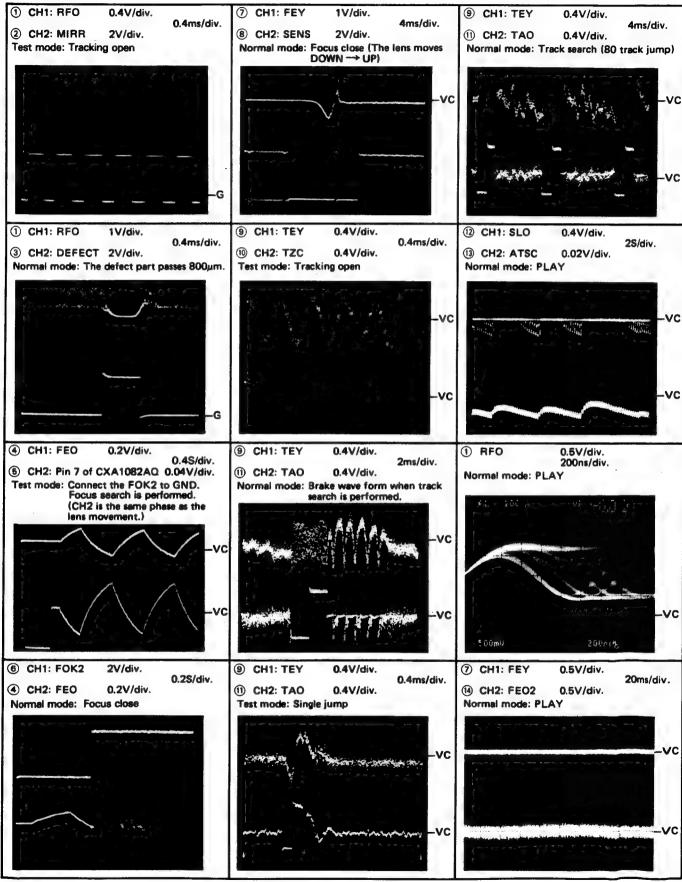


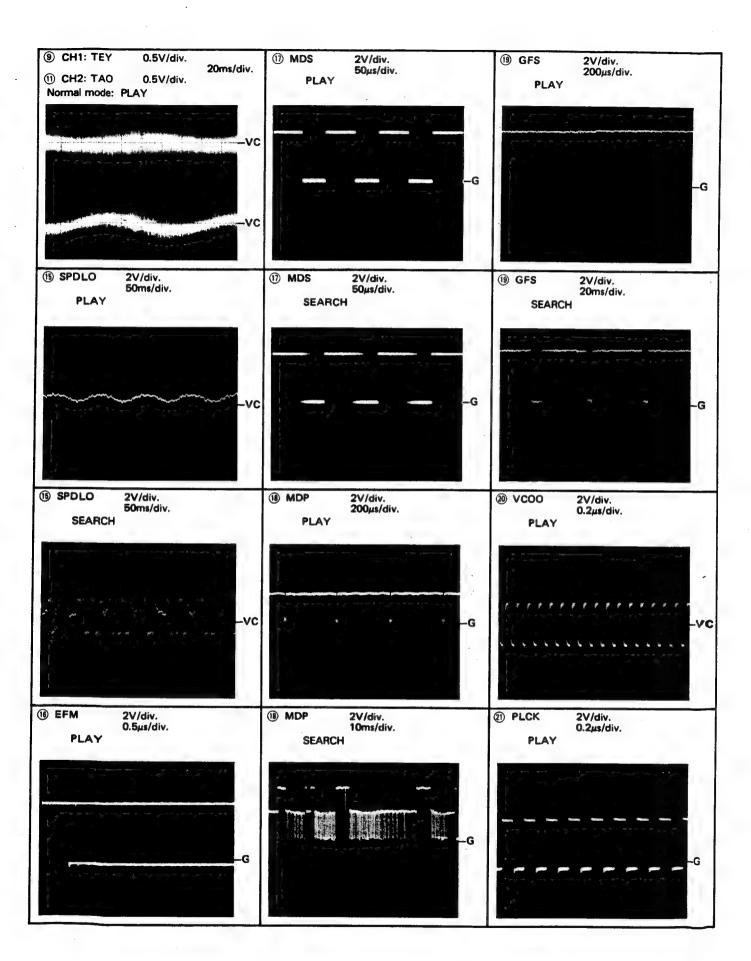
Wave Forms

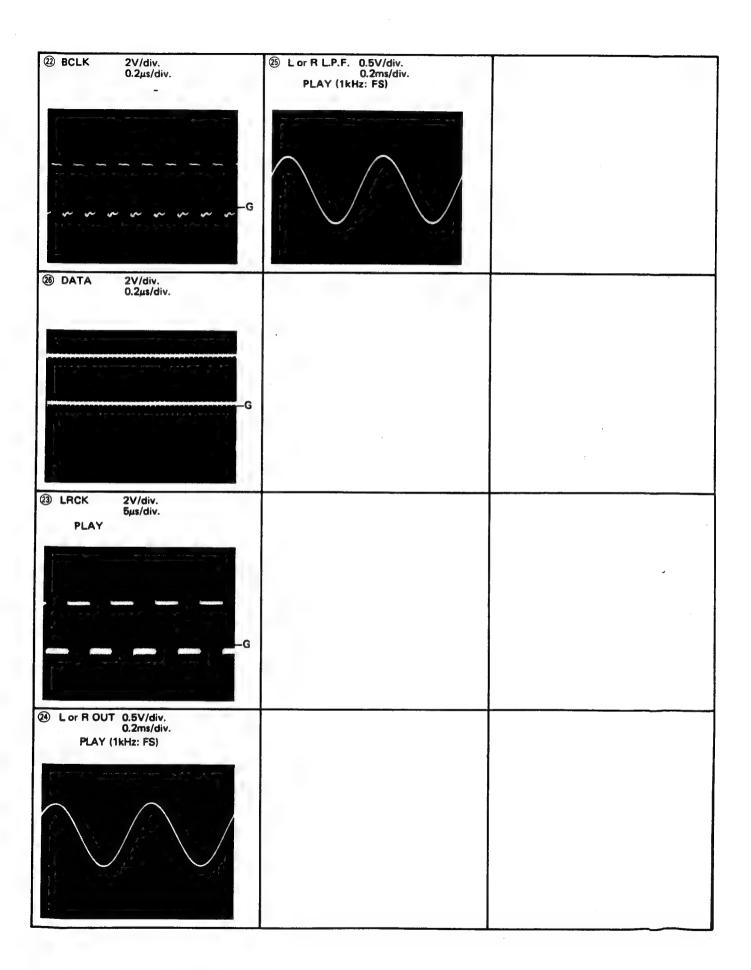
Note: 1. The encircled numbers denote measuring points in the circuit diagram.

2. Reference voltage

G: GND VC: Pin 14 of CXA1081M (2.5V)







19. EXPLODED VIEW

NOTE:

- For your Parts Stock Control, the fast moving items are indicated with the marks
 ★ ★ and ★.
 - * *: GENERALLY MOVES FASTER THAN *.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

- Parts whose parts numbers are omitted are subject to being not supplied.
- Parts marked by "

 " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1	BMZ30P050FMC	Screw		31	CXA2504	Grille Unit(UC)
	2		Case			CXA2506	Grille Unit(WG)
	3		Insulator			CXA2505	Grille Unit (EW, EI)
	4	CBA1094	Transportation Screw		32	PVZ14P045FZK	Screw
	5	CRP1031	Caution Card		33		Holder
					34		Cover
	6	CNM1877	Seal		0.		00101
	7	CDE1774	Cord		35		Lens
	8	BPZ20P050FMC	Screw		36		Lens
	9	CWX1117	Display Unit(UC)	*	36 37	CAC1622	Button
⊚		CWX1124	Display Unit (WG)	^	38	CHOIOLL	Cushion
•			Display Unit (Ma)		39		
		CWX1121	Display Unit(EW)	*	40	CAC1608	Cushion
••		CWX1125	Display Unit(EI)	_	40	CHC1000	Button
	10	OWNIIZO	Cushion	4	41	CAC1609	Dutte
	11	CNP1656	P.C.Board	*	42		Button
	12	CNP1655	P.C.Board	*		CAC1613	Button
	12	CHI TOOS	r.C. Boar u	*	43	CAC1610	Button
	13	CSS1023	Vtol Donoston	<u>*</u>	44	CAC1611	Button
	14	CNM1855	Xtal Resonator	*	45	CAC1612	Button
44	15	CEL1038	Insulator		40	BUZDADAEADUA	•
**	19		Lamp (UC, WG, EW)		46	BMZ30P050FMC	Screw
* *	10	CEL1037	Lamp (EI)		47	0701007	Case
	16		Film		48	CEG1037	Cover
	17		OL: -13 D1-4-		49	CDE1894	Cord (UC)
	17		Shield Plate			CDE1895	Cord(WG, EW, EI)
	18		Holder		50	041D4.04.0	
	19	0(1111.1.01	Lens	O	50	CWR1018	Power Supply Unit(UC)
	20	CWW1161	LCD (UC)			CWR1017	Power Supply Unit
		CWW1203	LCD (WG, EW)				(WG, EW, EI)
		CWW1162	LCD(EI)		51		Bracket
	01				52		Insulator
	21		Case				
	22		Cushion	**	53	AN7805R	IC
*	23	CAC1621	Button	**	54	AN6540	IC
*	24	CAC1620	Button		55	CKS-462	Plug
*	25	CAC1614	Button		56	BMZ30P060FMC	Screw
4	_	_			57		Plug
*	26	CAC1615	Button				
*	27	CAC1616	Button				
*	28	CAC1617	Button				
****	29	CAC1618	Button				
*	30	CAC1619	Button				

• Part List

Α	<u>Mark</u>	No. 1 2 3 4 5	Part No. BMZ26P030FMC CLA1311 CBA1062 CBH1182	Description Screw Bracket Collar Screw Spring	Mark	No. 46 47 48 49 50	Part No. CBH1134 CNM1792	Description Holder Spacer Arm Unit Spring Spacer
		6 7 8 9 10	CNV1641 CBH1137 CBA1076	Holder Arm Spring Screw P.C.Board		51 52 53 54 55	CNV1634 CBF1002 CBH1133	Lever Unit Bracket Roller Washer Spring
В		11 12 13 14 15	CBA1075 CXA2148	Bracket Unit Chassis Unit Cushion Screw Damper Unit		56 57 58 59 60	CNV1632 CBH1181 CNV1628	Bracket Unit Bearing Spring Arm Unit Gear
		16 17 18 19 20	CBH1139 CNV1633 YE20FUC CNV1631 CBF-166	Spring Holder Washer Cam Washer		61 62 63 64 65	CNV1627 CNV1629 CXA2456 CNY-265	Gear Gear Gear Unit Bracket Unit Cushion
		21 22 23 24 25	CNV1636 CBH1135	Bracket Roller Guide Arm Unit Spring	•	66 67 68 69 70	CXA1910 CBH1136 CNR1079	Carriage Unit Spring Arm Unit Spacer Ball
С	**	26 27 28 29 30	CNV1884 CBA1070 CSN1004 CNV1644 IIBA-175	Bearing Screw Switch(Disc Set) Holder Screw		71 72 73 74 75	CNV1643 CNC1738 CNC1739	Clamper Guide Chassis Unit Holder Holder
	**	31 32 33 34 35	CXM2129 CKS-719 CKS-721 SLH-34VC3F	Motor Unit(Loading) Bracket Connector Connector LED		76 77 78 79 80	PMS20P030FMC HBA-163 CBII1138	Screw Screw Spring Bracket Unit Holder Unit
D		36 37 38 39 40	CNV1639 CNP1711 YE15FUC	Holder Connector P.C.Board Washer Arm Unit	**	81 82 83 84 85	CBA-098 CXA2133 CBH1104 CNV1844	Screw Bracket Motor Unit(Carriage) Spring Spacer
	·	41 42 43 44 45	CLA1472 CLA1309 CNV1630	Collar Lever Collar Gear Arm Unit	** ** **	86 87 88 89 90	CNV1780 CNV1674 CSN-094 CXM1033 CNT1020	Holder Holder Switch(Home) Motor Unit(Spindle) Belt

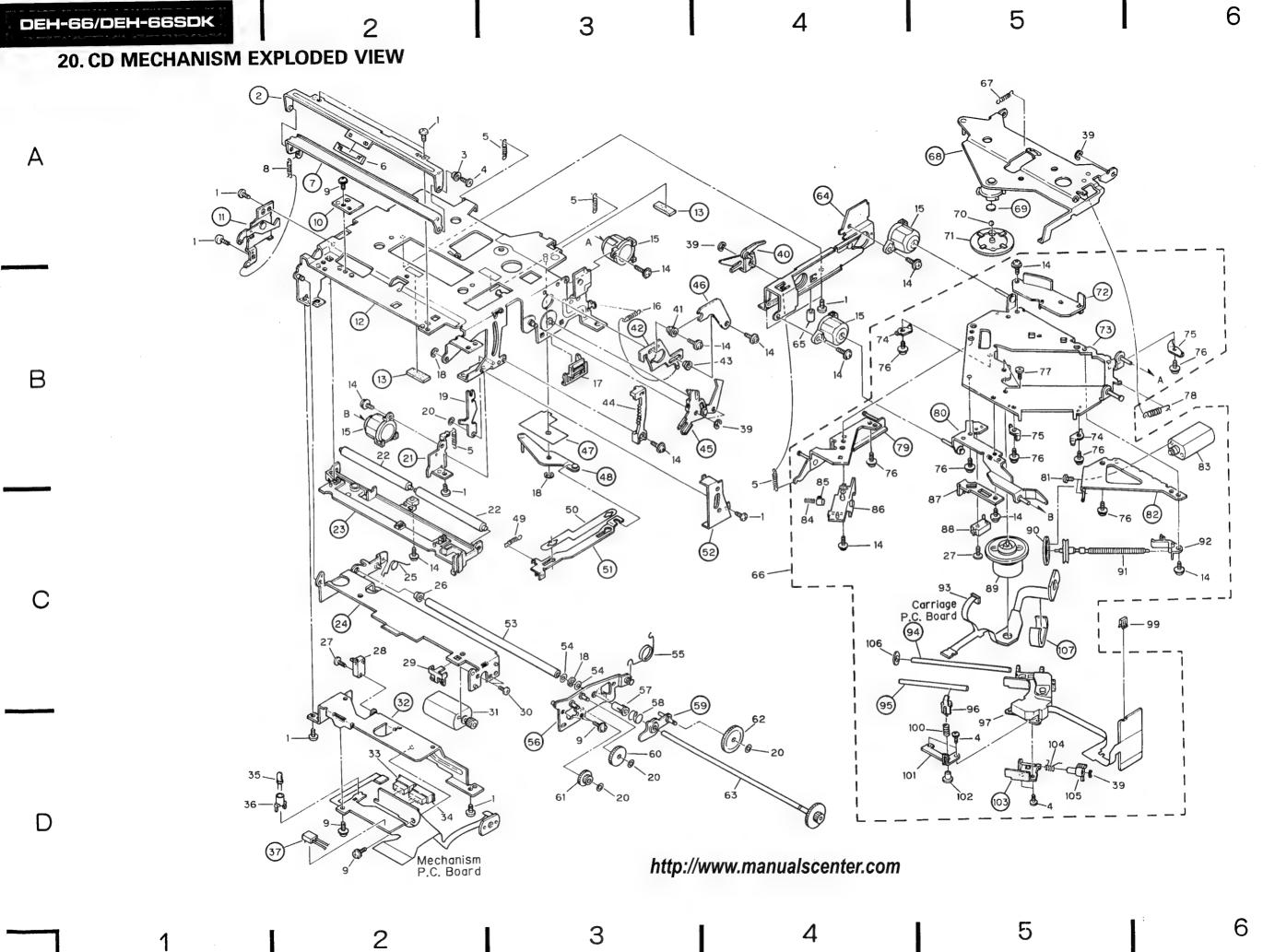


Fig. 53

21. ELECTRICAL PARTS LIST

NOTE:

· For your parts Stock Control, the fast moving items are indicated with the marks ## and #.

: GENERALLY MOVES FASTER THAN **#**.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Parts whose parts numbers are omitted are subject to being not supplied.

The part numbers shown below indicate chip components.

Chip Resistor

RS1/8S [] [] J, RS1/10S [] [] J Chip Capacitor (except for CQS....) CKS....., CCS....., CSZS.....

Unit Number: Unit Name : AM Unit(UC, EW, E1)

MIS	ŒU	ANEOUS					RESIST	ORS						
Mari	(==		Circuit Symi	oi & No. ====	Part Name	Part No.	Mark =		= Circui	t Symbol	& No.	====	Part Name	Part No.
## ## ##		201 201 202 203 203 204 201 202				PA4010 2SK435 2SC2458 DTC124ES 1S2473VH	R R R R	202 203 2 204	206					RS1/10S220 J RS1/10S681 J RS1/10S222 J RS1/10S473 J RS1/10S470 J
*	D D L L L	203 204 205 201 202 203		Ferri-Inductor Ferri-Inductor Ferri-Inductor	22 μ H	SVC203-AB 1SS133 CTF1026 LAU220K LAU470K	R R R	207 208 2 209 210 212	211					RS1/10S822J RS1/10S103J R01/4PS470JL RS1/10S882J RS1/8S223J
	L T T	204 201 202 203		Ferri-Inductor Coil Coil Coil	4.7μH	LAU4R7K CT81020 CT81004 CTB1022 (CTB1021)	CAPACIT		= Circui	t Symbol	& No.		Part Name	RD1/4PS222JL
	T T	204 205		Coil		CTE1013 (CTE1006) CTE1014	C	202 2	09 223 22 12 15 216 21		• • • •	•••		CKSQYB103K50 CKSQYB332K50
	T	206		Coil		(CTE1007) CTE1015 (CTE1008)	Č		08 210	- 220				CKSQYF473Z50 CKSQY8223K50 CCSQCH820J50
	X CF	201 201		Xtai Filter		CSS1014 CTF1027 (CTF1041)	C C	218						CEA010M50LL CCSQCH470J50 CEA2R2M35NPLL
	CF	202		Filter		CTF-100	C	220 221						CCSQCH430J50 CCSQCH100D50

Mark No. 91 92 93 94 95	Part No. CXA2375 CNV1781 CNP1709	Description Screw Unit Nolder P.C.Board Shaft Shaft	<u>Mark</u>	No. 101 102 103 104 105	Part No. CNC1736 CLA1319 CBH1106 CNV1513	Description Holder Screw Holder Unit Spring Rack
96 97 98 99 100	CGY1007 CBL1010	Holder PU Unit Short Pin Spring		106 107	CNV1863	Cushion Cover

		222 224		CSZA010K25 CEA470M16LL		103 151				RS1/10S1 RS1/10S2
		225		CKSQYB333K25	R	153				RS1/8S47
	C	227		CEA4R7M35LL) 157(UC)	_		RS1/10S2
	С	229		CEA470M16LL	R	156(EV	, EI) 157(E	W, EI)		RS1/10S3
		230 232		CEA220M6R3LL CCSQCH220J50		158				RS1/10S3
t	Nu	umber:			CAPAC11	rors				
t	Na	ame : FM Unit(UC,	EW, E1)		Mark =		Circuit S	ymbol & No.	==== Part Name	Part No.
C	ELLA	ANEOUS			C	1				CKSQYB10
k	===	Circuit S	mmbol & No. ==== Part Name	Part No.	C		1 102	E# E0		CKSQYB10
			= 00 E 110 161 0 1944		-	55 G	1 52 53 2	54 59		CKSQVF473
		1(UC)		CW1075 (CW1076)	С		3			CEAR47M5
		51		LA1140B LA2110	C					CKSQYF104
		101 151		LA3430P	C		6			CEA010M50
					C					CCSQSL10: CEA4R7M10
	Q	1	Chip Transistor ·	2SA1162 (2SA1179)	C					CCSQCH20
	Q	2	Chip Transistor	DTC124EK	С	103 10	5 161			CEA470M1
	Q	51	Chip Transistor	2SC2712		104	•			CKSQYB18:
				(2SD601)		151				CKSYF473
		71	Chip Transistor	2SJ106	_	152 153				CKSQYB33: CKSQYB22
		151	Industry 15 v.H	1S2473VH						
	L T	1 51 51	Inductor 15 μ H Coil	LAU150K CTC1029	-	154				CKSQYB15
		151	Ceramic Oscillator	CSS1028	_	155 157				CEA3R3M5 CSZAR22M
	.,			(CSS1022)	C	158(EW				CCSUSL68
	CR	101		CW-107	С	159(UC	() 160(UC)			CKSYB393
	CF	51 52	Ceramic Filter	CTF-182	C	159(EV	, EI) 160(E	W, EI)		CKSYB183
	VR		Semi-fixed 33kΩ(B)	CCP-325	lini i	Number :				
	VR VR	1(EV, Ei) 101	Semi-fixed $10k\Omega(B)$ Semi-fixed $10k\Omega(B)$	CCP-322 CCP-322			Tuner Unit	(SDK/VG)		
		151 152	Semi-fixed $150k\Omega(B)$ Semi-fixed $15k\Omega(B)$ Front End Unit	CCP-329 CCP-323 CWB1032		LANEOUS	: Circuit S	Symbol & No.	==== Part Name	Part No.
Н	STOS				## 1					LA1140B
					## 1	C 101		•		KHAL15
k	===	Circuit S	mbol & No. ==== Part Name	Part No.		C 151				MX35400
•	D	2 7 152		RS1/10S223.J		C 201 C 801				PA4010 KHA142
	R R	3(UC)		RS1/105473J						
	R	4 58 104		RS1/10S882.J	** Q	1		Chip Tra	insistor	2SAI 162
	R	5(UC)		RS1/10S0R0J	** Q	2		Chip Tra	neieter	(2SA1179 DTC124EK
	R	5(EW, EI)		RS1/10S471J	** 0	_		Chip Tra		2SC2712
	R	B(UC)		RS1/8S153J						(25)601)
	R	6(EV, EI)	E()	RS1/8S881 J	** Q	71				2SJ105
	R R	21(EV, EI) 22(EV, 23	EI	RS1/8S0R0J RS1/10S0R0J	** Q					2SK435
	Ř	51		RS1/8SOROJ	** Q	202				2SC2458
				•	## Q		14 205	Phi A	ada.	DTC124ES
	R	52 50 57		RS1/10S331J	* D	151		Chip Die	DOG	MAI51WA
	R: R	53 57 54		RS1/10S473.j RS1/10S104.j	* # D	201 20)2			1S2473V#
	R	55 60		RS1/105154J		203				SVC203-
	R	56		RS1/8S123J	* D				45 11	1SSI33
		50		DD1 /400100 !!	L		01	Inductor		LAUI 50K
	R R	59 61 62		RD1/4PS183JL RS1/10S472J	ι	201		Ferri-la	nductor 1000 μ H	CTF1026
	n									
	R	71		RS1/10S474.1						
	R R	71 101		RS1/10S474.J RS1/10S332.J						

Har	* ==	====	 -	Circuit	Symbol	å No.	Pa	rt Name	Part No.	CAP	ACI	TORS										
	1.	202				erri-in	ductor 2	•• ••••• •• •	LAU220K	- Mor	د ــ			C:-		CL		••				
		203					ductor 4		LAU2ZUK LAU470K		n			Circ	3115	2A#0	01 #	NO.	====	Part	Name	Part No.
		204					ductor 4		LAU4R7K		C	1										CVCOVDIANUEA
		51				oil		,	CTC1029		Č		802									CKSQYB102K50
	T	201				oil			CTB1020		C		54									CKSQYB103K50 CKSYF473Z50
									0.01010		C	51	52	53	59							CKSQYF473Z50
	T				C	oil			CTB1004		C	55	62									CCSQSL330J50
	Т	203			C	oil			CTB1022													CONTRACTOR (A)
	_								(CTB1021)		C		63									CEAR47M50LS2
	Т	204			C	oil			CTE1013		C											CKSQYF104Z25
									(CTE1006)		C											CEA010M50LS2
	•	205			_						C	60										CCSQSL101J50
	T	205			C	oil			CTE1014		C	61										CEA4R7M16NPLL
	T	206			_	4:1			(CTE1007)		С	70										
	•	200			U	oil			CTE1015			101	105	101								CCSQCH200J50
	X	201			¥	tal			(CTE1008) CSS1014			152	103	101								CEA470M16LS
					^	va i			C221014			154										CKSQYB332K50
	X	801			C	eramic (Scillato	nr.	CSS1019			159	160									CKSQYB153K25
		501			•			•	DSP-201M-S00	R	•		100									CKSYB123K50
		51	52		C	eramic F	liter		CTF-182		C	201	209	223	228							CKSQYB103K50
	CF	2 01				ilter			CTF1027			202										CKSQYB332K50
									(CTF1041)			203		216	219	226						CKSQYF473Z50
									•			204										CKSQY8223K50
		202				ilter			CTF-100		C	206	207									CCSQCH820.150
	VR VR		ten				d 10kΩ(CCP-322		_											
	VR		152				td 15kΩ(CCP-323			211										CEA010M50LS2
**	**	191					d 150kΩ	(B)	CCP-329			213										CCSQCH470J50
					F	ront End	Unit		CWB1032			218 220										CEA2R2M35NPLL
RES	STOR	S										221										CCSQCH430J50
											•	-										CCSQCH100D50
Mark	===		== (Circuit	Symbol	& No.	=== Par	t Name	Part No.		C	222										CSZA010K25
••••				•••							C	224										CEA470M16LS
	R	2							RS1/8S223J		C	22 5										CKSQYB333K25
	R	4							RS1/8S682J			227										CEA4R7M35LS
	R R	5 6							RS1/8S471J		C	229										CEA470M16LS
	R	7							RS1/10S681J		_											
		•							RS1/10S223J			230										CEA220M6R3LL
	R	23	51						RS1/10S0R0J			232 801										CCSQCH220J50
	R	52							RS1/10S331J			803					220	E/101	,			CQMA683,J50
	R	53	57 8	302					RS1/10S473J			804				4	220 д	L/101	1			CCH1015
	R	54							RS1/10S104J		•	001										CEA4R7M35LS
	R	55	60						RS1/10S153J		C	805										CEA220M18LS
	_										C	806										CSZAR33M35
		56							RS1/10S123J													COLINIONIO
		58							RS1/10S682J	Unit												
		59	00						RD1/4PS183JL	Unit	Na	me	: CI) Uni	ŧ							
		61 71	02						RS1/10S472J													
	n	11							RS1/10S474.j	MISCE	ELLA	NEOU	S									
	R 1	01							DC1 /100000 :	Mark			_ /	-يمر (*	i4 c	ه ساسه						B. 1.12
	Ri								RS1/10S332J	TRALIK			- (ATCU	11 S	AMIDO I	at No	o. =	F	art N	BINE	Part No.
	R · 1								RS1/8S183J RS1/8S562J	##			-							*** **		6V41001H
	R 2								RS1/10S220J	**												CXA1081M
	R 2	02							RS1/10S681J	##												M5218FP KHA215
										**												LC7218M
	R 2	03 2	:06						RS1/10S222J	##												CXA1082A0
	R 2								RS1/10S473J													
	R 2								RS1/10S470J			651 6										PA3023
	R 2								RS1/10S822J			855 6	57									M5218FP
	R 20	vo 2	11						RS1/10S103J	**												M5233FP
1	R 20	09							DD1 //D000000000000000000000000000000000	**												CXD1135Q
	R 2								RD1/4PS470JL	##	IL.	102										CXK5816M
	R 2								RS1/10S682J	##	ic :	702										
	R 2								RS1/8S223J RD1/4PS222JL	**												μ PD6355G
	R 80								RS1/10S222JL	**												KHA220 PD4136A
										##												ru4136a M51955AFP
										##			81									M51945AFP

Mari	< =	Circ	uit Symb	ol & No. ==== Part Name	Part No.	RESIS	TOI	RS									
**	10	754			M54546AL	Mark	-		Cir	aui t	Comb	w1 1	l No		- Dan	4 Nome	Don't No
##		C 851			M5228FP							~			- FAI	r water	Part No.
		C 882			PDG011		D	351									DCI MDDGGG II
##		351			2SB822F			353 381	E20	EAO	700	700	051	050 0	01		RS1/2P220JL
* *			452(SDK/	WG) Chip Transistor	DTC343TK		5	354 363	372	340	100	rus	931	60Z B	81		RS1/10S102J
		•						355 610		785							RS1/10S223J
##	Q	453(SDK/WG)		Chip Transistor	UN5210			356 357			RRG						RSI/10S113J RS1/10S563J
	Q		455(SDK/	WG) Chip Transistor	2SD1819												K317 103303J
	Q			Chip Transistor	2SC3295		R	360 361									RS1/10S124J
		503 504 505		Chip Transistor	2SC4116			362 763									RS1/10S564J
**	Q	507(SDK/WG,	EW, EI)	Chip Transistor	DTC124EU		R	364 365	618	671							RS1/10S105J
	^	E00 E00						366 377	666								RS1/10S562J
#	-	508 509 510 511		Chip Transistor	DTA124EU		R	367									RS1/10S104J
##		510 511		Chip Transistor	DTC114TU		_										•
#		514 758		Chip Transistor	RN2427		R	379 515	525	710	711	722	723				RS1/10S472J
**					2SD1226M			380 617	628	682							RS1/10S203J
**	ų	515(SDK/WG)			2SD1226M			382 383									RS1/10S363J
**	Q	601 651 652	852 701	705 750 700	190011			384 630									RS1/10S823J
**	~	501 001 002	005 101	Chip Transistor	UN2211		n	904 030									RS1/10S273J
**	Q	702 706 759		CHIP HERSISTOF	UN2111		P	451 452									DC1 /100F00 :
##	_	703 704		Chip Transistor	2SD1048			453 454									RS1/10S562J
**	-			Chip Hensistoi	2SD1228M			455 456	505	521	527	520	537 (272 00	žK.		RS1/10S433J
	_				250122011			457(SDK/		V21	021	020	001	טוט טונ	W		RS1/10S473J RS1/10S103J
##	Q	851 852 855	856	Chip Transistor	DTC343TK			458(SDK/		459(SDK/	WG)					RS1/10S104J
**	Q	853		Chip Transistor	2SD1819												1001010
##	Q	854 884		Chip Transistor	DTA114EU		R	460 461	462	853	854	859	860				RS1/10S223.J
##	-	882 883		Chip Transistor	DTC114EU		R	463 464	501	502	503	504	523 !	530 53	2		RS1/10S222J
##	Q	885		Chip Transistor	UN5210	1	R	506 533	609	614	619	627	773 1	74			RS1/10S104J
	_							511(SDK/									RS1/10S561J
*	D	451(SDK/WG)		Chip Diode	MA141VA	1	R	512(SDK/	WG,	EV,	EI)						RS1/10S332J
	D	452 453 505			MA3056		_										
*	Đ	501 502 503 504		Chip Diode	MA141VK			513 517	526	528	531	775					RS1/10S103J
:	D	504 506 851 852		Chi- Ni-4-	MA143			514									RS1/10S122J
•	U	900 631 632		Chip Diode	MA141VA			516 524 518 667		000	212						RS1/10S474J
*	D	651			ERA15-02			519 629	004	000	111						RS1/10S472J
	D	652 653			ERAS2-004Y			310 023									RS1/10S153j
	D	654 655 656	657 658	659	ERAS2-004VH		R	520									RS1/10S393J
	D	661 662			HZS2ALL			522									RS1/103383J
	D	701		Chip Diode	MA151VA	i	R	534 535	538	714	724	725	726 7	27 72	8		RS1/10S0R0J
						1	R	541(SDK/	WG)								RS1/105221J
*	D	702		Chip Diode	MA151K	- 1	R	542(UC)									RS1/10S392J
	D	753			MA3200												
*	D	754			HZ6LB1			601 602									RS1/10S101J
#	D	755			MA3062			606									RS1/10S224J
	L	501		Ferri-Inductor 47 μ H	LAU470K			607 764									RS1/108883J
		651		Chale Call DOO	77 111000			608									RS1/108823J
		351		Chok Coil 220 µ II	CTH1035	,	K	611									RS1/10S432J
		751		Thermistor	CCX1001			612									DOI /1000001
##			egj-five	Thermistor d 47kΩ(B), 10kΩ(B)×2	CCX-021 CCP1005			613									RS1/108823J
		352	CHITTIAC	Semi-fixed $47k\Omega(B)\times4$	CCP1006			616									RS1/108624J
	***			DOM: TIXOU TIME (D)/AT	CG 1000			620									RS1/10S183J
**	VR	604		Semi-fixed 2.2kΩ(B)	HCP-267			621									RS1/10S3382.J RS1/10S1884.J
##		651		Semi-fixed 47kΩ(B)	HCP-275	•											W11 1001041
		501(EW, EI)			DSP-201M-S008		2	622 670	687	898 4	RQ7 7	71F 3	719 7	10 75	1 750		DC1 /1001091
		851(UC)			CW1097			623 765		(VV 1 (10 (10 (10 10	1 102		RS1/10S10/3J RS1/10S47/3J
	18	851(SDK/VG,	EV, EI)		CW1096	9		624 882									RS1/103473J
	10	OE0						631									RS1/10S272J
		852 501		VI-1	CW1096	F	1	665 790									RS1/108821J
		701		Xta!	CSS1030												•
		751		Xtal Ceramic Oscillator	CSS1027			668 679									RS1/10839/2J
	^	.01		Buzzer	CSS-042 CPV1005	8		672									RS1/108364J
				vuade!	CLA1002			674 716	-								RS1/108332J
						R		676 677 '	199								RS1/10S20 1J
							(678									RS1/10S2223J

Mark Circuit Symbol & No. —— Part Name	Part No.	Mark Circuit Symbol & No Part Name	Part No.
R 680 R 681 R 683 R 685 692 R 690	RS1P1R5JL RS1/10S203J RS1/10S101J RS1/10S105J	C 605 620 622 628 629 C 608 C 609 756 C 610 619	CKSYB473K25 CEA220M6R3NPLL CKSQYB472K50 CCSQCH221J50
K 090	RS1/10S272J	C 616	CEA220MBR3LS
R 691 703 755 855 R 694 786 R 701 R 712 713 R 721	RS1/10S103.J RS1/10S822.J RS1/10S100.J RS1/10S392.J RS1/10S4R7.J	C 617 C 618 C 623 C 624 C 651 670	CEA4R7M16LS CKSQYB882K50 CKSQYB272K50 CCSQCH391J50 CKSYF224Z25
R 753 754 756 766 767 779 R 762 R 770 771 R 778 788 R 781	RS1/10S881J RS1/10S391J RS1/10S222J RS1/10S0R0J RS1/10S303J	C 652 470 μF/16V C 654 658 C 656 C 661 663 C 665 678 852	CCH-114 CCSQCH221J50 CEA100M16LS CEA010M50NPLL CKSYB473K25
R 782 R 856(UC) R 856(SDK/WG, EW, E1) R 857 858 866 R 867(UC) 868(UC)	RS1/10S154J RS1/10S0R0J RS1/10S101J RS1/10S102J RS1/10S0R0J	C 671 672 C 674 705 C 675 676 C 677 679 C 680	CSZSR68#120 CASA100#6R3 CEA2R2#135LS CCSQSL681J50 CCSQSL681J50
R 883 R 884 885 886 R 889(UC) R 890 891 892 893	RS1/10S204J RS1/10S222J RS1/10S0R0J RS1/10S6R8J	C 881 C 701 710 712 726 C 702 C 706 707 C 717 718	CKSYB393K25 CASABR8MGR3 CASA220MGR3 CCSQCH470J50 CEA470MGR3LS
CAPACITORS		C 722 723	
C 351 719 720 C 352 611 625 626 662 664 713 724 727 751 C 353 613 666 C 354 357 C 356 C 359 614 C 360 361 C 370 703 704 C 371 512 615 C 372 C 451 452 453 454 C 455 456 602 653 708 709 C 457 458 520 855 856 857 858		C 752 C 753 C 755 C 757 C 851(SDK/WG, EW, EI) C 853 854 C 859 C 861 862 C 881	CEA330M6R3LS CCSQCH300J50 CCSQCH300J50 CEA101M6R3LS CASA6R8H10 CKSYB473K25 CEA3R3M50LS CEA220M6R3LS CEA220M6R3LS CEA3R3M25LS CKSQYB153K25
C 459 C 460 518 519 606 C 461 C 462 C 501 502	CEA470M18LS CEA220M18LS CCSQCH330J50 CCSQCH330J50 CCSQCH270J50		
C 503 510 511 513 C 505 C 508(SDK/WG, EW, EI) C 509 517 728 729 754 758 C 514	CKSQVF473Z50 CCSQSL561J50 CSZSR68H20 CKSQVB103K50 CKSQVF104Z25		
C 516 621 C 521(SDK/WG) C 522(SDK/WG) C 601 C 603 607 612 716	CEA4R7M16NPLL CEA220M10LS CEA470M16LS CKSQYB2222K50 CEA100M6R3LS		

Unit Number: RESISTORS Unit Name : Display Unit Circuit Symbol & No. ==== Part Name Part No. Mark ==== MISCELLANEOUS(UC, SDK/WG, EW) R 901 RS1/10S2231 Mark ==== Circuit Symbol & No. ==== Part Name Part No. R 902 907 918 919 920 92 922 925 RS1/10S222.I RS1/10S473.I R 903 IC 901(UC, EW) PD4139A R 904 RS1/10S221.J 1C 901(SDK/WG) PD4153A R 905 RS1/10S361J NJM2903H IC 902 Q 901 2SB822 R 906 RS1/10S123J Q 902 Chip Transistor UN5210 R 908 924 926 RS1/8S222J R 909 RS1/10S222J Q 903 904 905 906 907 Chip Transistor DTC124TU R 910 911 912 913 914 942 RS1/10S204.1 R 915 916 917 RS1/10S104J D 901(UC, EV) Chip Diode MA141VA Đ 901(SDK/WG) Chip Diode MA141A 902(UC, SDK/WG) 903(UC, SDK/WG) Chip Diode R 927 928 929 930 D MA141A RS1/10S181J R 931 932 902(EW) 903(EW) Chip Diode MA141VA RS1/RS331.1 R 933 934 RS1/8S241J **MA141A** 935 936 938 939 RS1/10S331J ħ 904 Chip Diode LN260RCPX R 937 940 RS1/10S471J Đ 905 LED Đ 906 907 Chip Diode MA141K 908 909 CL55UR/YORO R 941 RS1/10S391J LED R 943 944 RS1/10S121J 910 911 912 913 914 915 916 917 918 919 LED CL61YCD680 CAPACITORS 920 921 922 925 928 929 931 933 CL61YCD680 D 923 924 926 927 930 932 LED LN460YCPX 901 Inductor 15 µH LAU150K Mark ===== Circuit Symbol & No. ==== Part Name Part No. L 901 902 903 904 905 906 907 908 909 910 Switch CSG-255 5 C 901 911 912 913 914 915 916 917 918 919 920 Switch CSG-255 CKSQYF104Z25 C 902 905 908 CKSYF334Z25 C 903(SDK/WG, EW, EI) C 904 S 921 922 923 924 925 Switch CSG-255 CCSQCH080050 CCS0CH040C50 H. 901 902 Lauro SV 60mA CEL1038 TC 901(UC) Trimmer CCL1012 C 906 907 CKSQYB103K50 Xtal CSS1023 LCD(UC) CW1161 Unit Number: Unit Name : Amp Unit LCD(SDK/WG, EW) CW1203 Mark ===== Circuit Symbol & No. ==== Part Name MISCELLANEOUS(EI) **** ***** *** *** *** *** *** *** *** *** *** *** ## IC 551 TA8215L Mark ====== Circuit Symbol & No. ==== Part Name Part No. **## 0** 551 2501859 Chip Diode # D 551 MARORI ## 1C 901 PD4139A CTH1023 L 551 Choke Coil N.1M2903M **##** IC 902 R 551 552 RS1/105682J # Q' 901 2SB822 ## Q 902 Chip Transistor UN5210 R 553 554 RS1/105123.I ## Q 903 904 905 906 907 Chip Transistor DTC124TU R 555 556 RD1/4PS181JL R 557 558 559 560 RD1/4PS4R7JL **‡** D 901 902 903 Chip Diode MA141VA RS1/10/S821J R 561 D Chip Diode R 562 563 566 RS1/8SORO.J 904 MAT41A # D 906 907 Chip Diode MA141K RS1/10/SOROJ LN260RCPX R 564 565 # D 905 1.60 CL55UR/PGORO C 551 552 CEA4R7P135LL # D 908 909 LED CCS0S1.271.150 C 553 554 C 555 556 571 CEA470P110LL 910 911 912 913 914 915 916 917 918 919 LED CL61PGCD680 CQEA224J63 CL61PGCD680 C 557 558 559 560 D 920 921 922 925 928 929 931 933 LED * D 923 924 926 927 930 932 LED LN3BOGCPX CCH-124 C 569 1000 #F/16Y 901 Inductor 15 # H LAU150K 901 902 903 904 905 906 907 908 909 910 Switch CSG-255 C 570 220 µ F/10V CCH1014 C 572 CKSYF473Z50 ## S 911 912 913 914 915 916 917 918 919 920 Switch CSG-255 ## S 921 922 923 924 925 Switch CSG-255 ## 1L 901 902 Lamp 8V 60mA **CEL1037** CSS1023 Xtal LCD CW1162

Unit Number: Unit Number: Unit Name : Power Supply Unit Unit Name : Carriage P.C.Board MISCELNEOUS Mark ===== Circuit Symbol & No. ==== Part Name Part No. Mark ==== Circuit Symbol & No. === Part Name Part No. **##** M 831 Motor Unit(SPINDLE) ## M 832 Motor Unit(CARRIAGE) **##** IC 951 M5F7809M-01 ## S 831 Switch(HOME) ## IC 952 AN6540 ## IC 953 AN7805R Miscellaneous Parts List **## Q 951 953** 2SR1243 ## Q 952 954 955 Mark _____ Circuit Symbol & No. ____ Part Name Part No. 2SB1238 -## Q 956 960 Chip Transistor 2SC2712 PU Unit ## Q 957 ## Q 958 959 # D 951 Chip Transistor UN2210 Chip Transistor UN2212 ERC05-10B * D 952 953 954 955 956 957 ERA15-02VH L 951 Choke Coil CTH1015 L 952 Choke Coil CTN1005 RESISTORS Mark ===== Circuit Symbol & No. ==== Part Name Part No. R 952 955 957 959 961 968 RS1/10S223J R 953(SDK/WG, EW, EI) RS1/10S152J R 954(UC) RS1/10S152J R 956 958 960 RS1/10S2221 R 963 RS1/10S333J R 962 RS1/10S152J R 965 RS1/10S104J R 966 967 RS1/10S153.J R 969 RS1/10S103J CAPACITORS Mark ==== Circuit Symbol & No. === Part Name Part No. C 951 952 958 CEA010M50LS2 C 953 1000 #F/16V CCH1003 C 954 957 2200 µ F/16V CCH1001 C 955 470 µ F/16V **CCH-114** 0 956 CEA101H10L2 C 959 CEA101M10LL C 960 C 961 962 963 964 C 965 966 C 967 CEA470M10LS CKSQYB153K50 CCG-105 CEA102M16L2 Unit Number: Unit Name : Mechanism P.C.Board Mark Circuit Symbol & No. ==== Part Name Part No. . ## Q 831 # D 831 Photo Transitor(DISC SENSE) PH102-F LED(DISC SENSE) SLH-34VC3F ## H 833 Motor Unit(LOADING) CXA2129 ## S 832 Switch(DISC SET)

CSN1004

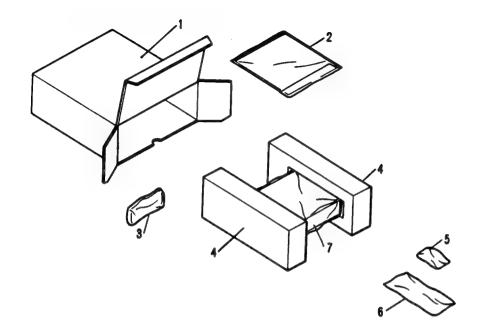
CXM1033

CXV3133

CSN-094

CGV1007

22. PACKING METHOD



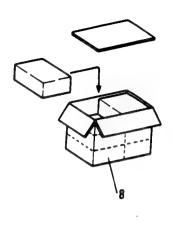


Fig. 54

• Parts List

Mark	No.	Part No.	Description Mark	<u>llo.</u>	Part No. CDE1894	Description Cord (UC)
	1	CHG1447	Carton (UC)	3	CDE1895	Cord (WG, EW, EI)
		CHG1449	Carton (WG)			Styrofoam
		CHG1448	Carton (EW, ES)	4	CHP1119	
	2-1		Card	5	CEA1381	Accessory Assy
	2-2	CRW1020	Label (UC)	5-1	CBH-865	Spring (×2)
		CRW1047	Label (WG, EW, EI)			(I 13- · /×0)
				5-2	444	Holder (×2)
	2-3		Caution Card	5-3	CNF-111	Strap
	2-4	CRD1168	Owner's Manual(UC)	5-4	CNV1917	Bush
		CRD1171	Owner's Manual(WG)	5-5		Screw Assy
		CRD1169	Owner's Manual (EW)	5-5-1	BMZ30P050FMC	Screw (×2)
		0112200	(English, French, German,			4 43
			Spanish)	5-5-2	BMZ40P080FMC	Screw (×4)
				5-5-3	BMZ50P080FMC	Screw (×4)
		CRD1170	Owner's Manual (EW)	5-5-4	CBA-102	Screw (X1)
		ONDITIO	(Swedish, Norwegian, Dutch)	5-5-5	CBA1002	Screw (×1)
		CRD1195	Owner's Manual (EI)	5-5-6	HMF40P080FUC	Screw (×1)
	2-5		Card (UC)			
	2-3		Card (WG, EW, EI)	5-5-7	NF50FMC	Nut $(\times 2)$
			Out a (iid, bii, bi)	6	CNS1403	Panel
	0.0		Caution Card(WG)	7	CEG-114	Cover
	2-6		Caution Card	8	CHL1447	Contain Box (UC)
	2-7		Card (UC) (×2)	•	0.1.2.1.1	
	2-8					
	2-9		Caution Card (WG)			
	2-10		Passport			







SERVICE GUIDE ORDER NO. CRT 1161

CD MECHANISM UNIT

- This service manual is a description of the CD mechanism found in the model numbers listed in the table below.
- When performing repairs use this manual together with the specific manual for the model under repair.

Model	Service Manual
DEH-66/UC	
DEH-66SDK/WG	CRT1166
DEH-66/EW	Chillo
DEH-66/EI	

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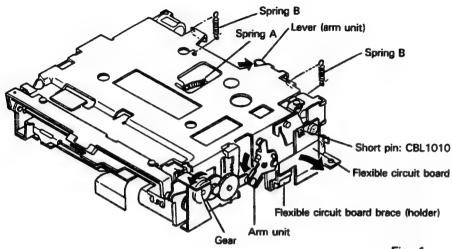
FK © JUNE 1988 Prined in Japan



1. DISASSEMBLY

• Disassembly of the Carriage Unit

Note: There may be times when the names of parts used in this manual are not the same as those used in the lists accompanying the Exploded View. If a different name is used here, the part name given in the Exploded View is also provided in parentheses ().



- Fig. 1
- Put the mechanism unit into a loading complete state. (Move the lever back and rotate the gear while pressing down lightly on the arm unit. Rotate the gear until the three carriage unit shafts are free and the unit is supported by the four damper units.
- 2. Remove Spring A and two Springs B.
- Remove the flexible circuit board from the flexible circuit board brace.

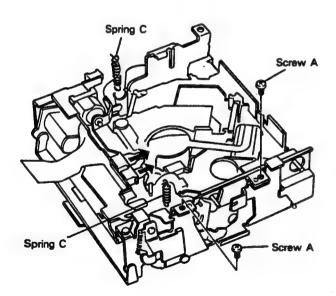
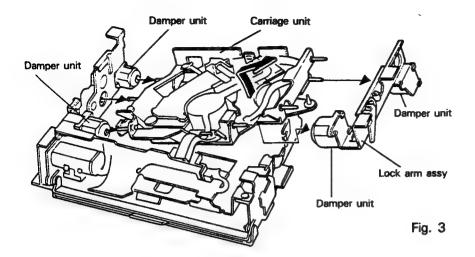


Fig. 2

- 4. Turn the mechanism unit upside down.
- 5. Remove the two Springs C.
- Remove the two flexible circuit boards from their connectors.
- 7. Remove the two Screws A.





- 8. Lift the lock arm assembly and then pull out the carriage unit.
- Remove the carriage unit from the lock arm assembly.
 Note: The damper units are lined with a thin rubber film. Be careful not to damage this when disassembling.

Disassembly of the Carriage Motor Unit

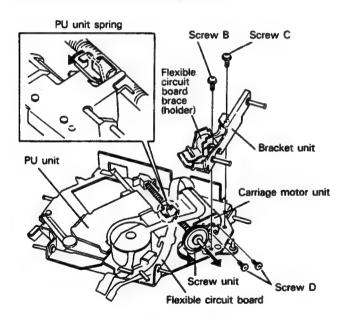


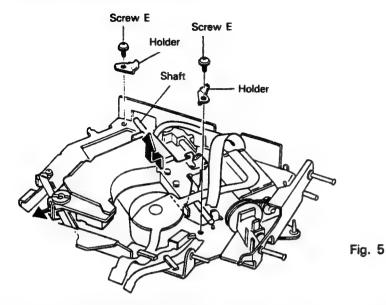
Fig. 4

- After removing the Screw B and Screw C, remove the bracket unit. At this time remove the flexible circuit board from the flexible circuit board brace.
- 2. Remove the belt.
- Cock the PU unit spring as shown in Fig. 4 and then move the PU unit to its outermost position.
 (Cocking the spring disengages the screw unit so that the PU unit can be moved by hand from above.)
- 4. Pull the screw unit out of the assembly.
- 5. Remove the two Screws D and then the carriage motor unit.

Note: When reinstalling the carriage motor unit, tighten Screw D and seal it.



• Disassembly of the PU Unit



- Cock the PU unit spring as shown in Fig. 4.
 Move the PU unit to the center of the shaft for easy removal.
- 2. Remove the two Screws E and then the holders.
- 3. Remove the PU unit, lifting it from the shaft side where the holders have been removed and being careful not to catch the shaft on the opposite side.
- 4. Pull the shaft out of the PU unit.

Disassembly of the Spindle Motor Unit

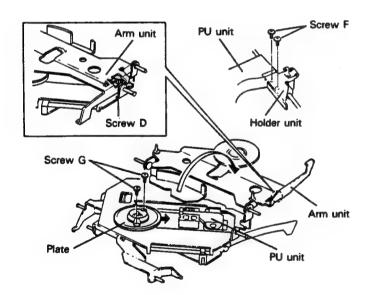


Fig. 6

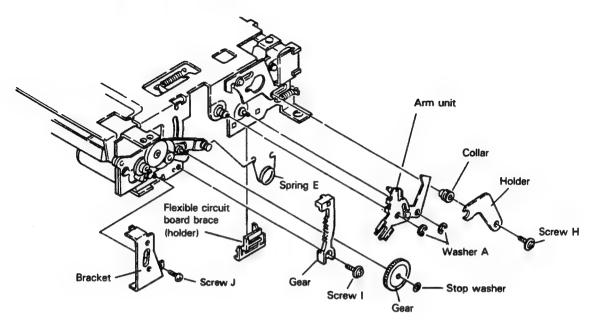
- 1. Remove the two Screws F and then remove the holder unit from the PU unit.
- 2. Cock the PU unit spring as shown in Fig. 4 and move the PU unit to its outermost position.
- 3. Turn the whole carriage unit right side up.
- 4. Remove Screw D and turn the arm unit upside down.
- 5. Turn the spindle motor plate so that the holes on the plate are at the position of the screws underneath.
- 6. Remove the two Screws G.

 Note: When reinstalling the spindle motor unit, ig/nten
 the Screws G and seal them.
- Slide the spindle motor unit onto its side and remove it.



Fig. 7

Disassembly of the Loading Motor Unit

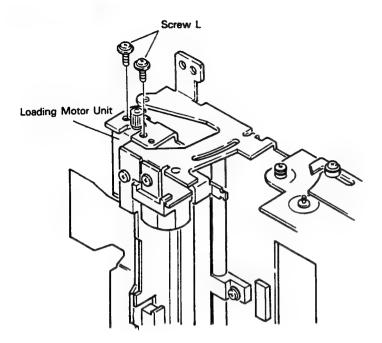


- 1. Remove the carriage unit. (Refer to the previous section entitled, "Disassembly of the Carriage Unit.")
- 2. Remove the flexible circuit board brace.
- 3. Remove Screw H and then the holder. Note: When Screw H is removed, the collar will also come free. Be sure not to lose it.
- 4. Remove the Screw E.
- 5. Remove the two Washers A and then the arm unit.
- 6. Remove the stop washer and then the gear.
- 7. Remove Screw I and then the gear.
- 8. Remove Screw J and then the bracket.
- Screw K
- Bracket unit Washer B -Roller
- 9. Remove Spring F.
- 10. Remove washer B.
- 11. Remove the two Screws K and then pull out the bracket unit.

Note: The bearing at the tip of the roller will also come loose. Be careful not to lose it.

Fig. 8



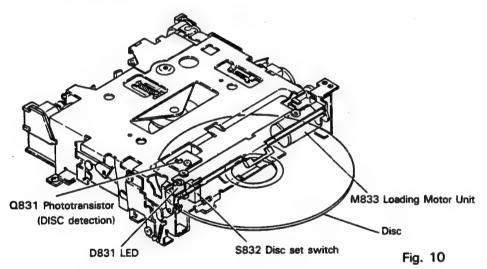


12. Remove the two Screws L and then the loading motor unit.

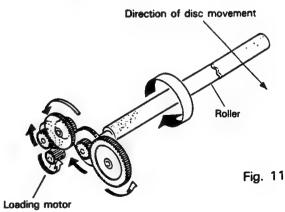
Fig. 9

2. MECHANISM DESCRIPTION

Loading Operation



- When a disc is inserted into the unit, it enters between the LED and the phototransistor with the result that the light from the LED to the phototransistor is blocked.
- When the phototransistor detects a disc presence in the unit, the loading motor begins to rotate and loading begins.
- 3. When the loading motor rotates, the roller is turned and the disc is moved into the unit. (Fig. 11)





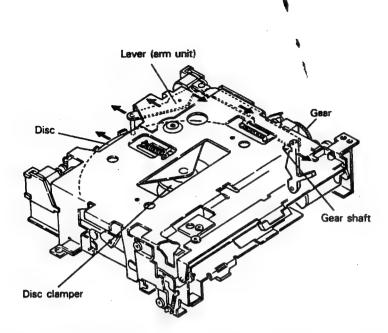


Fig. 12

- 4. When the disc pushes on the lever, the gear shaft lock is released. The gear meshes with another internal toothed gear and is lowered. (See Figs. 12, 13)
- 5. The action of the gear shaft moving down lowers the disc clamp and the disc is held in place.
- As the gear is lowered when it meshes with the internal toothed gear, the gear unit also is lowered and the disc set switch pressed.
- At the same time, the disc door is lowered and the disc insert door is blocked to prevent the introduction of another disc.

The three shafts of the carriage unit are in a free mode and the carriage unit is in an anti-vibration mode supported by the four damper units. (Fig. 14)

When the disc set switch is turned on, loading motor rotation stops and the loading operation is complete.

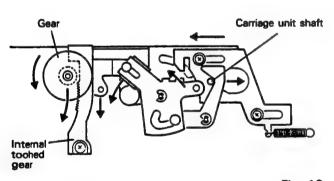


Fig. 13

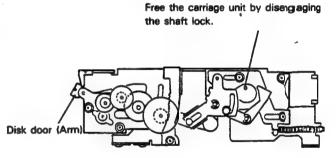
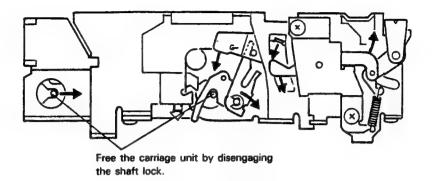


Fig. 14



(view of reverse side)



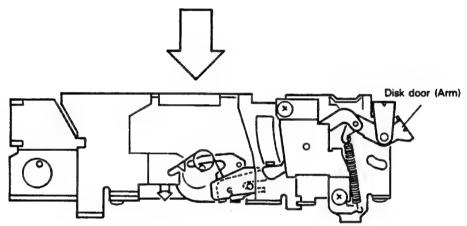


Fig. 15







ORDER NO.

COMPACT DISC PLAYER





Note:

- See the separate manual CX-173 (CRT1161) for the CD mechanism description.
- Refer to the service manual CDX-M100 (CRT1136) for finding circuit description which are not shown in this manual.
- The following power supply parts differ according to the unit's serial number.

	Serial No.	Serial No.
	00001 ~ 00500	00501 ~
IC951	KHA1001B D/D Converter	L780S05-LR Regulator
C957		CKSYF334Z25
C958	_	CKSYF104Z25

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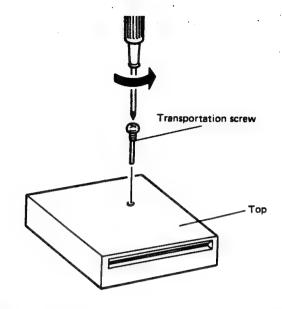
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CD Player Service Precautions

- 1. Since these screws protects the mechanism during transport, be sure to affix it when it is transported for repair, etc.
- For pickup unit (CGY1007) handling, please refer to "Disassembly" (Fig. 13) During replacement, handling precautions shall be taken to prevent an electrostatic discharge (protection by a short pin).
- During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.



SPECIFICATIONS

General	
System	Compact disc audio system
Usable discs	
	Sampling frequency: 44.1 kHz
	Number of quantization bits: 16; linear
Power source.,	1 4.4 V DC (10.8-15.6 V allowable)
Grounding system	Negative type
Power consumption	5.5 W
Maximum power consumption	n9 W
Dimensions (chassis)	180(W) × 50(H) × 150(D) mm
(nose)	170(W) × 46(H) × 7(D) mm
Weight	1.3 kg(2.9 lbs.)

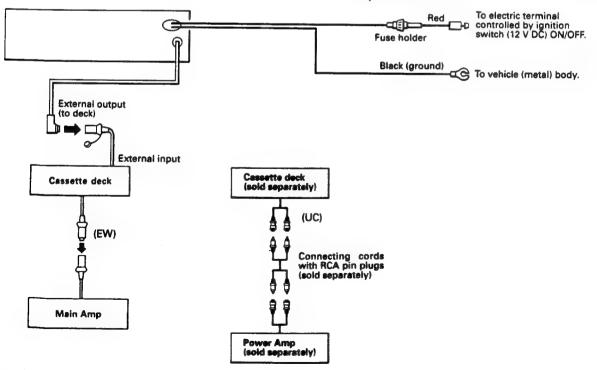
Audio 5-20,000 Hz (±1 dB) Signal-to-noise ratio 85.dB (1 kHz) (IEC-A network) Dynamic range 87 dB (1 kHz) Wow and flutter Below measurement range Distortion factor 0.008% (1 kHz, 0 dB) Output voltage 250 mV (1 kHz, 0 dB) Number of channels 2 (stereo)

Note

Specifications and the design are subject to possible modification without notice due to improvements.

1. CONNECTION

- Before making final connections, make temporary connections then operate the unit to check for any connecting cord problems.
- Refer to the instruction manual for details on connecting the various cords of the deck and power amp then make connections correctly.





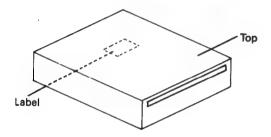
2. SAFETY INFORMATION (CDX-3/EW)

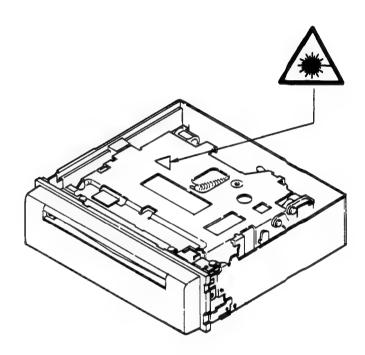
- 1. Safety Precautions for those who Service this Unit.
- Follow the adjustment steps (see pages 14 through 35) in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

- 1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
- 2. During repair or tests, do not view laser beam for 10 seconds or longer.
- 2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.
- 3. The triangular label is attached to the mechanism unit plate unit.







4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.

Wavelength

= 780 nanometers

Radiant power

= 69.7 microwatts

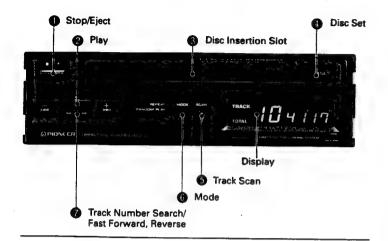
(Through a circular aperture stop having a diameter of 80 millimeters)

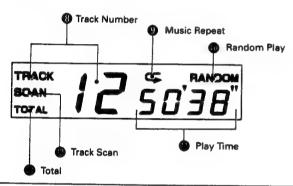
0.55 microwatts

(Through a circular aperture stop having a diameter of 7 millimeters)



3. PLAYING COMPACT DISCS





When a space of a few seconds exists between the selections of the disc being used, ■ will show - *02, - *01 when the spaces are passed.

Using Track Scan

This function lets you scan through the tracks on a disc by playing only the first ten seconds of each track.

Press button ("SCAN" will appear on the display).

2. To cancel track scan and continue playing the current track, press button 🚳 again.

After track scan has played through all of the tracks, disc play resumes from the beginning of the track from which track scan was started.

Using Music Repeat and Random Play

Each time to is pressed, the mode is changed in the following order: Repeat ("

appears) → Random Play ("RANDOM" appears) → Release

Music Repeat

To repeat the music you are listening to, select the repeat mode ("

appears).

When music repeat is not operational, the whole disc will be played repeatedly.

Random Play

To play music randomly, select the random play mode ("RANDOM" appears). Once the current track has been played, the microprocessor will randomly select the next and subsequent tracks.

Since selections are played in random order, the same selection may be played twice in succession.

Turn the cassette deck power switch or the tuner power switch to the OFF position.

1 When a disc is inserted half-way into the disc insertion slot
 with its label side upward, the disc is automatically loaded and played.

During the first five seconds after loading the disc, the "TOTAL" indicator appears in the display, and the total number of tracks 8 and their total playing time are indicated.

2 Use track number search to select a track.

Press the (+) side of button 0 to increase the number at position 8, or the (-) side to decrease the number. Holding either side of button down changes the track number at high speed.

3 Set the volume, balance, bass and trable to the desired level using the cassette deck controls.

To stop CD play, press button .

(To restart CD play, press button . CD play restarts from the point where it was stopped.) To eject the disc, press button 1 again. If the ejected disc is pushed back in, it is loaded and played again.

Note:

- It takes a short time after a disc is loaded before it is played. This is because the CD player requires a setup time to read digital signals
- When ◀ SET ❸ is displayed, a disc is loaded. If another disc is inserted into the slot at this time, the discs may be damaged or the player may malfunction.
- Do not insert two discs into the slot at the same time. This may cause a malfunction.
- The cassette tape deck and tuner can be used while a disc is in the set position.
- If the engine is started during CD play, or if the ignition key is turned OFF and is then turned to ACC or ON, CD play stops. Press button (2) to restart CD. Playing will resume close to where it left

Using Fast Forward and Reverse

To fast forward, hold down button and press the (+) side of button . To reverse, hold down button and press the (-) side of button (

Sound is output during fast forward and reverse operations.



4. CIRCUIT DESCRIPTION

(1) DIB, AUXB Signals

These signals are used to control the operations of the CD player. The DIB signal is output from the main unit (tuner, cassette deck, etc.), and goes high while the main unit is operating. When this signal is received, IC751 pin ③ goes low; the CDX-3 stops operation then enters the standby mode.

When the main unit stops operation, the DIB signal goes low to enable the operation of the CDX-3. At this time, if the CDX-3 is stopped during playing, play starts automatically from the tune which was being played when the CDX-3 was stopped.

The same operation is also performed when the ACC function is deactivated.

When the DIB signal goes high while the CDX-3 is operating, the CDX-3 stops operation and enters the stop mode.

The AUXB signal is output at high level while the CDX-3 is operating, signaling to the main unit that the CDX-3 is operating.

(Note: Low = 0 V, High = 14.4 V)

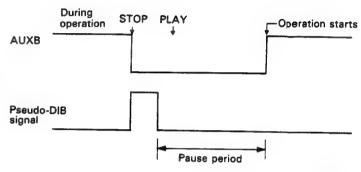
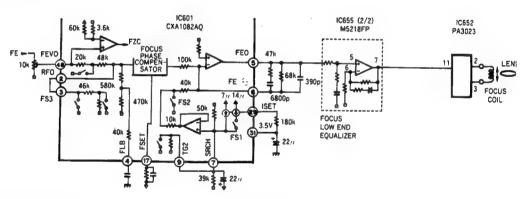


Fig. 1

(2) Focus Servo Circuit



FEVO and FEO are in phase.

Fig. 2 Focus Servo Section Block Diagram

A block diagram of the focus servo circuit is shown above. The capacitor connected to pin 4 provides a time constant to boost the low-frequency response in the continuous play mode. The internal constant current (ISET current) is determined by the resistance connected to pins 9 and 3: 7 μ A when a 180-kohm resistor is connected.

ISET current = 1.276 V/R

This current is used for the focus search, tracking jump and the carriage kick operations. The reference voltage for the inverted input of the FZC comparator is set to (VCC-VC) × 5.7% (approx. 140 nV).



a) In-focus (search voltage):

An in-focus sequence is used to drive the laser lens within the focus S-curve (approx. 10 μ m) to close the servo loop when it is focused. The search voltage is determined by the sensitivity of the focus actuator which is designed so that the lens drive distance is set to \pm 1mm. In this system, the following voltages are obtained at pin (7).

When FS1 is OFF:

 $-7 [\mu A] \times 22 [kohms] \times 0.63 = -0.097 \approx$

-0.1 [VC]: → Lens UP

(22 kohms = 50 kohm//37 kohm)

When FS1 is ON:

 $(14 - 7) [\mu A] \times 22 [kohms] \times 0.63 \approx +0.1$

[VC]: → Lens DOWN

As above, FS1 is turned ON and OFF alternately to move the lens up and down. (The time constant for moving up/down is determined by the resistor and capacitor connected to pin ①.)

The focus operation is not designed for auto sequence operation. It is executed by following the timing chart (see Fig. 3). This is because the "focus close" command is output only when the lens is moved up to prevent the focus operation from malfunctioning.

* "Lens UP" shows that the lens is moved up close to the disc surface.

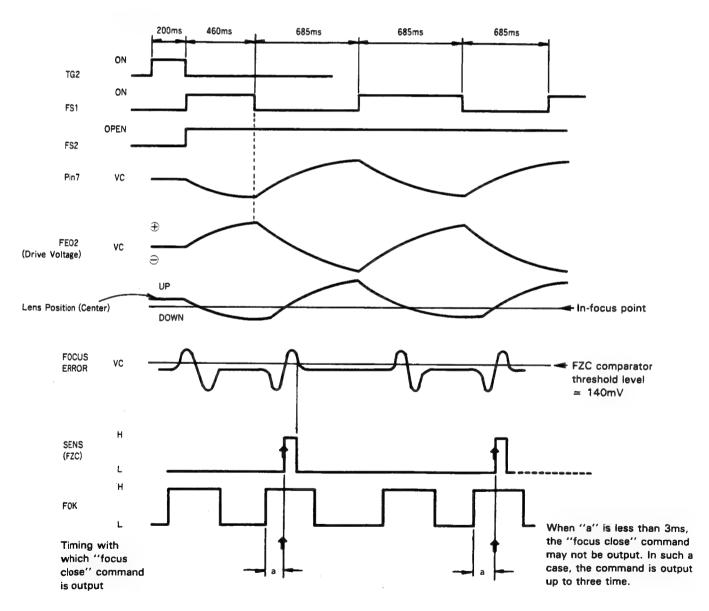


Fig. 3 Focus Close Timing Chart



(4) APC (Automatic Power Control) Circuit

As the laser diode has negative temperature characteristics as well as high-level optical output when driven by a constant current, it is necessary to control the current using a monitoring photodiode to stabilize the out-

put power. For this purpose, an APC (Automatic Power Control) circuit is employed. In this system, an LDI of approx. 50 - 60 mA is used.

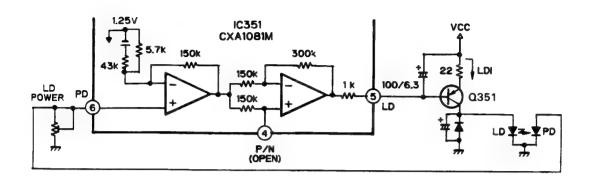


Fig. 5 APC Circuit

(5) Search Sequence

Example: To search the 4th tune when playing the 3rd tune

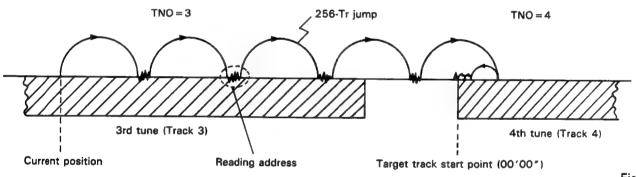


Fig. 6

- ① After comparing the current track number with the target track number, since the target track number is higher than the current one, the laser pick-up jumps outward by 256 Tr.
- ② The address of the current position is read to compare the track numbers again.
- 3 Since the target number is higher, the laser pick-up jumps outward by 256 Tr again.
 - When operations ② ③ are repeated, the current track number will become the same as the target track number.
- 4 Then the number of tracks between the relative address and the beginning of the next tune is calculated and the laser pick-up jumps.
- (5) The relative address at the current position is read to compare it with the target (00'00"). If both addresses are the same, the searching sequence finishes. If not, the calculation and jump operation will be performed again.
 - When the operations in 4 and 5 are repeated, [00'00"] is obtained, the search sequence will be released and the player enters the PLAY mode.
- * In actual operation, the laser pick-up returns by 1 Tr to prevent missing the beginning of the tune before starting play.



(3) Tracking, Carriage Servo Circuit

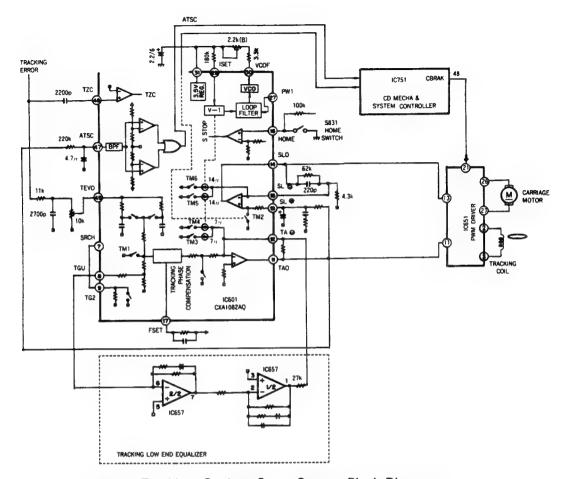


Fig. 4 Tracking, Carriage Servo System Block Diagram

The above figure is a block diagram of the tracking/carriage servo circuit. To perform tracking jump operation (of the laser pick-up) in the FWD (forward) or REV (reverse) direction, TM1 is turned ON and at the same time, TM3 and TM4 are turned ON and OFF. At this time, the voltage generated at pin ① TAO is determined by the current flowing in TM3/TM4 and the feedback resistance from pin ②. That is:

Track jump peak voltage (TAO) = ISET i (tracking) \times RTAO = 7 [μ A] \times 82 (kohms) = 0.57 [VC]

To perform carriage kick operation in the FWD (forward) or REV (reverse) direction, TM2 is turned ON and at the same time, TM5 and TM6 are turned ON and OFF. At this time, the voltage generated at pin (4) SLO is determined by the current flowing in TM5/TM6 and the feedback resistance from pin (15). That is:

Carriage kick voltage (SLO) = ISET i (carriage) \times RsLo = 14 [μ A] \times 62 [kohms] = 0.87 [VC]

The polarities of pin (45) TEVO and pin (11) TAO are reversed.

a) Tracking Equalizer:

This circuit is constructed in 2 stages and consists of a phase compensator (for high frequencies) incorporated in an IC and externally connected low-frequency compensator connected in parallel. The former is the main path and the latter from the side path. These signals are added in pin ② of the TAO amp so that the specified equalization characteristics are obtained.



(6) SETUP Sequence

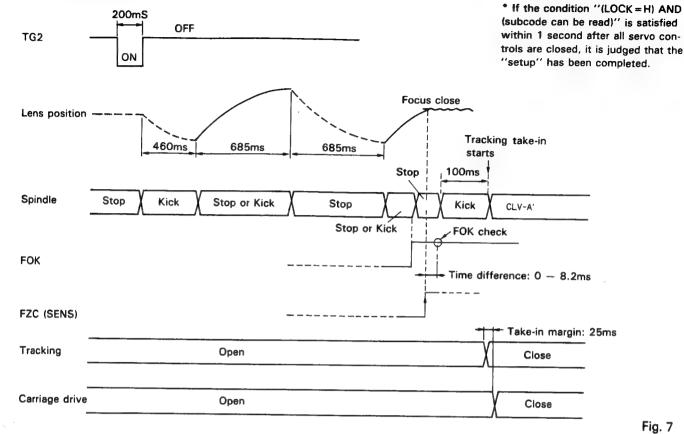


Fig. 7

(7) Spindle Stop Sequence

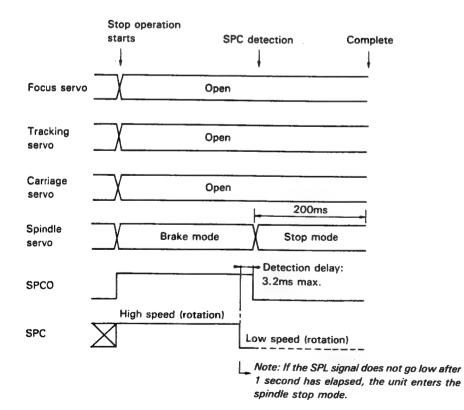


Fig. 8



(8) Flow Chart

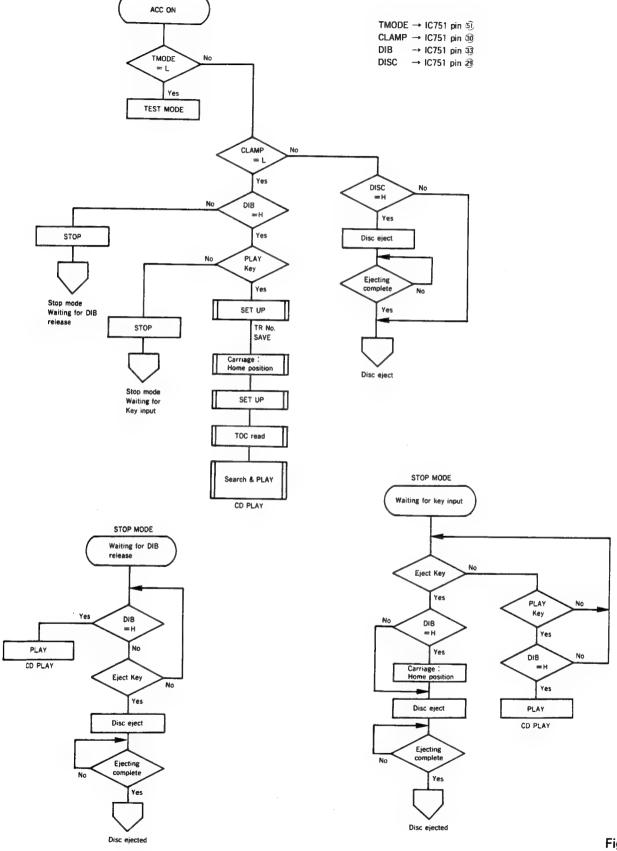
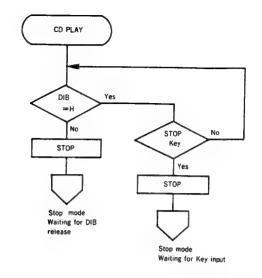


Fig. 9



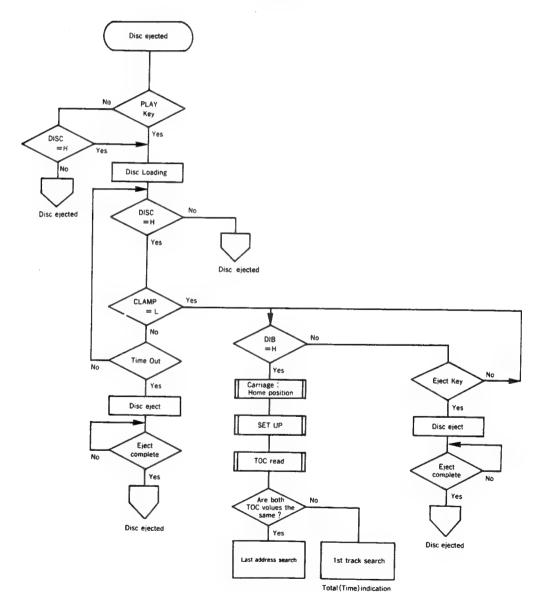


Fig. 10



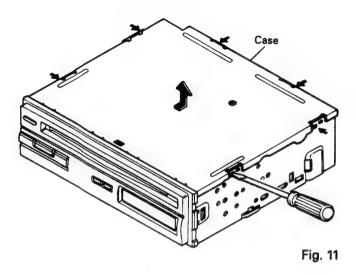
5. DISASSEMBLY

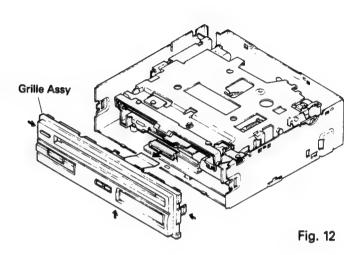
• Removing the Case

1. Insert and turn a flat screwdriver to remove the case.

• Removing the Grille Assy

- 1. Press claws at three locations indicated by arrows, and pull out grille assy.
- 2. Disconnect the connector, and then remove the grille assy.





• Removing the CD Mechanism Unit

- 1. Remove the four screws.
- 2. Disconnect the two connectors, and then remove the CD mechanism unit.

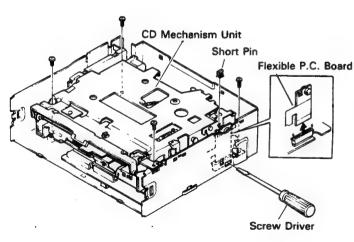


Fig. 13

NOTE: When remove the flexible p.c. board, always insert a shorting pin or insert an inter-pattern short (jumper) before disconnecting the flexible p.c. board from the connector.

6. BLOCK DIAGRAM

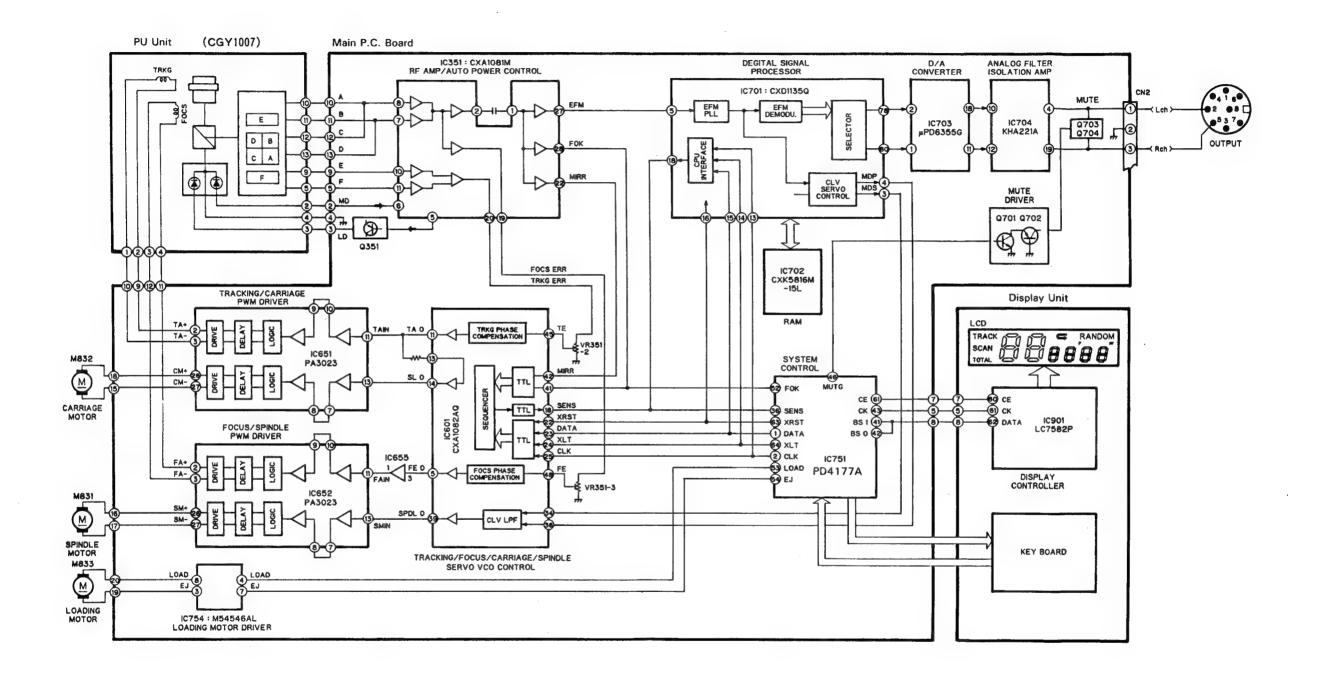


Fig. 14



7. ADJUSTMENT

1) Precautions

CDX-3 uses a single power supply (+5V) of the regulator. The signal reference botanical, therefore, is connected to pin no. 14 (approx. 2.5V) of IC351 (CXA1081M) instead of GND. (VC at test point)

If VC and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to VC and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to VC with the channel 2 negative probe connected to GND.

And since the frame of the measuring instruments is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

If by accident VC comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and/or electrical shocks to the system when making adjustments.
- · Test mode starting procedure
- 1. Connect test point TMODE to GND.
- 2. Turn ACC ON.
- Test mode cancelation
- 1. Disconnect test point TMODE from GND.
- 2. Turn ACC ON.
- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit. Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.
 - During PLAY, even if the eject button is pressed, the disc will not be ejected and the unit will remain in the PLAY mode.
 - O The unit will not load a disc.

When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

2) Adjustment Point

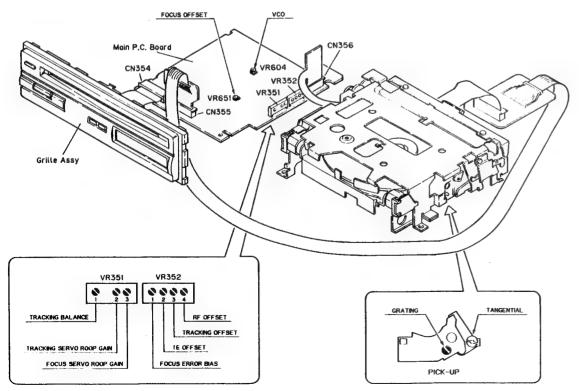
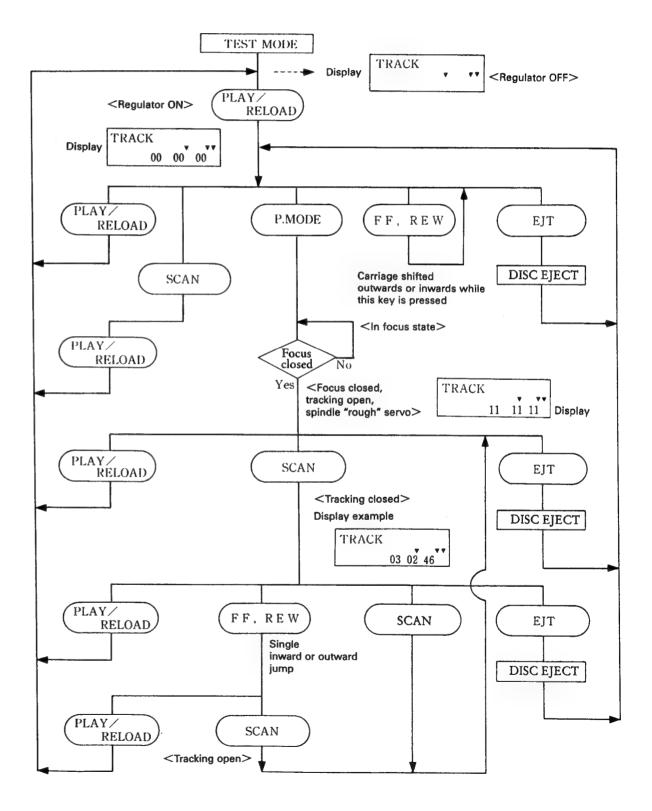


Fig. 15

• Flow Chart



• Test Point

Main P.C. Board

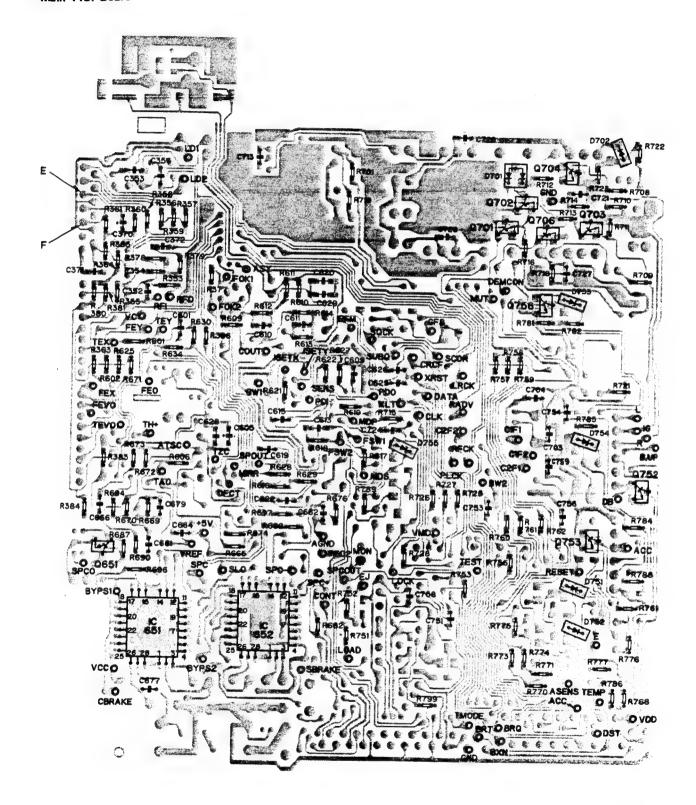


Fig. 16



7.1 Focus Offset Adjustment

Purpose: To adjust the electrical offset of the focus amplifier to zero.

Maladjustment symptoms: No focus closing

- Measuring equipment/ jigs
- Measuring point
- Test disc and setting
- Adjustment position
- · Multi-meter or oscilloscope
- FEO2
- No disc, test mode
- VR651

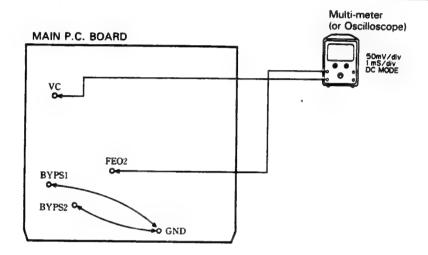


Fig. 17

- Connect BYPS 1 and BYPS 2 to GND. (Perform the following steps to stop the PWM drive.)
- 2. Switch regulator ON.
- Using VR651, adjust the FEO2 DC voltage in reference to VC to a value of 0 ±25mV.
- 4. Perform the following steps while BYPS 1 and BYPS 2 are connected to GND.

7.2 VCO Free Run Frequency Adjustment

- Purpose: To adjust the EFM decoder reference clock free- run frequency to a suitable value
- Maladjustment symptoms: Spindle lock not possible, distorted sound or no sound at all
- Measuring equipment/ jigs
- Measuring point
- Test disc and setting
- Adjustment position
- Frequency counter, extension cables
- Pin no.70 (PLCK) of IC701 (CXD1135Q)
- No disc
- Test mode
- VR604

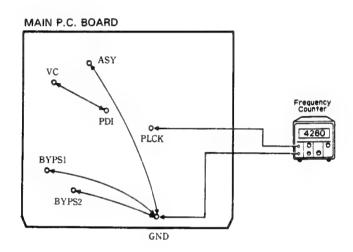


Fig. 18

Adjustment Procedure

- 1. Connect pin no.26 (TP ASY) of IC351 to GND. Connect BYPS 1 and BYPS 2 to GND.
- 2. Connect pin no.1 (TP VC) of IC601 to pin no.28 (TP PDI).
- 3. Switch regulator ON while in test mode.
- Connect the frequency counter to pin no.70 (TP PLCK) of IC701 (CXD1135Q).
- 5. Adjust VR604 to obtain a frequency of 4.26 $\pm\,0.005 \text{MHz}.$
- 6. Switch regulator OFF.
- Disconnect the leads connecting TP VC to TP PDI, and TP ASY to GND.

Note: Connect TP VC and TP PDI with leads kept as short as possible.

Note: Connect the frequency counter ground to TP GND as shown in the figure.



7.3 RF Offset Adjustment

Purpose: To adjust the RF amplifier offset to a suitable value

Maladjustment symptoms: Focus closure fails readily

- Measuring equipment/ iias
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope
- RFO
- No disc
- VR352-4 (RFO)

• Test mode

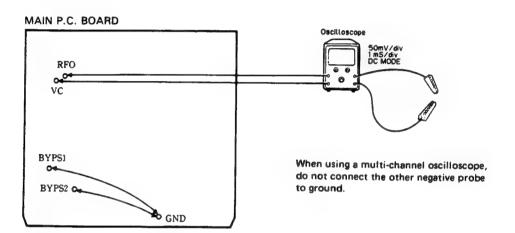


Fig. 19

- 1. Connect BYPS 1 and BYPS 2 to GND.
- 2. Switch regulator ON.
- 3. Using the oscilloscope, measure the RFO DC voltage in reference to VC, and adjust VR352-4 (RFO) to obtain a reading of \pm 25mV.



7.4 Tracking Offset Adjustment

- Purpose: To adjust the electrical offset of the tracking amplifier to zero
- Maladjustment symptoms: Search times too long, carriage run-away
- Measuring equipment/
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope
- TAO low-pass filter output
- No disc Test mode
- VR352-3 (TO)

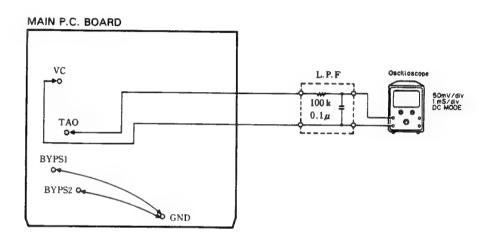


Fig. 20

Adjustment Procedure

- 1. Insert a low-pass filter between TAO and VC.
- 2. Check that BYPS 1 and BYPS 2 are connected to GND.
- 3. Switch regulator ON.
- 4. Using the oscilloscope, measure the TAO LPF output DC voltage in reference to VC, and adjust VR352-3 (TO) to obtain a reading of 0 \pm 25mV.

The low-pass filter may be left in place for later adjustments.



7.5 TE Offset Adjustment - I

Purpose: To adjust the electrical offset of the tracking servo to zero.

Maladjustment symptoms: Search times too long, carriage run-away

- Measuring equipment/ jigs
- Measuring point
- Test disc and setting
- Adjustment position
- DC voltmeter
- TAO low-pass filter output
- No disc
 Test mode
- VR352-2 (TEO)

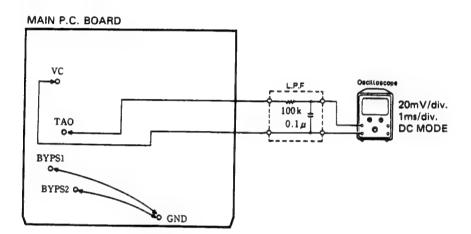


Fig. 21

- 1. Check that BYPS 1 and BYPS 2 are connected to GND.
- 2. Switch regulator ON while in test mode.
- 3. Press the SCAN key to close tracking.
- Using VR352-2 (TEO), adjust the TAO LPF output DC voltage in reference to VC to a value of 0 ± 10mV.
- 5. Switch regulator OFF.

7.6 Tracking Balance Adjustment - I

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away
- Measuring equipment/ iias
- igs ● Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope
- TEY (Tracking error signal), low-pass filter output
- SONY TYPE 4 (or TYPE 3) Test mode
- VR351-1 (T. BAL)

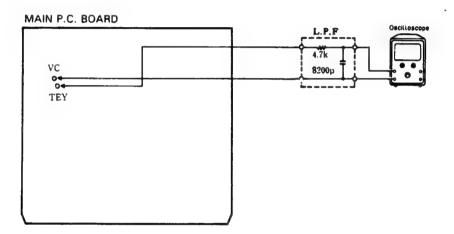
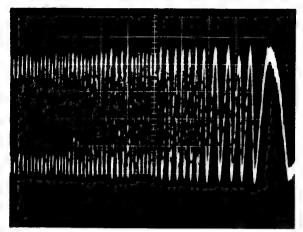


Fig. 22

Adjustment Procedure

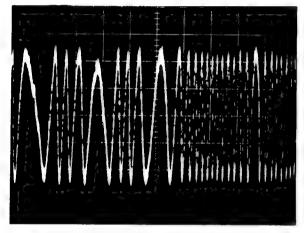
- 1. After checking that regulator is OFF, connect the low-pass filter as shown in the diagram.
- 2. Disconnect BYPS 1 and BYPS 2 from ground.
- 3. Load the test disc (SONY TYPE 4). Switch regulator ON.
- 4. Using the FF or REW key, move the pick-up to about the center of the signal surface.
- 5. Press the P.MODE key to close focus.
- Using an oscilloscope, observe the TEY signal in respect to VC. Then adjust VR351-1 (T.BAL) to set the positive and negative amplitudes to the same levels. (See Fig. 23-25)
- 7. Switch the power OFF.

The low-pass filter may be left in place for later adjustments.



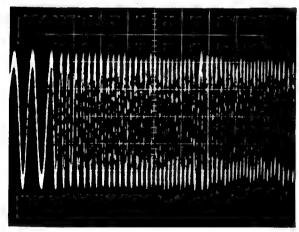
+5% NG

Fig. 23



±0% OK

Fig. 24



-5% NG

10ms/div. 0.2V/div. DC Mode

Fig. 25



7.7 Tangential Skew Check

Purpose: To check whether tangential skew has been misaligned or not when replacing the pick-ip unit.

Maladjustment symptoms: No disc playback; track jumping

 Measuring equipment/ jigs

- Oscilloscope, extension connectors, screwdriver
- Measuring point
- Test disc and setting Adjustment position
- REO
- SONY TYPE 4 (or TYPE 3) Normal mode
- Pick-up tangential adjustment screw

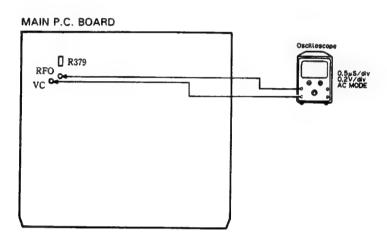
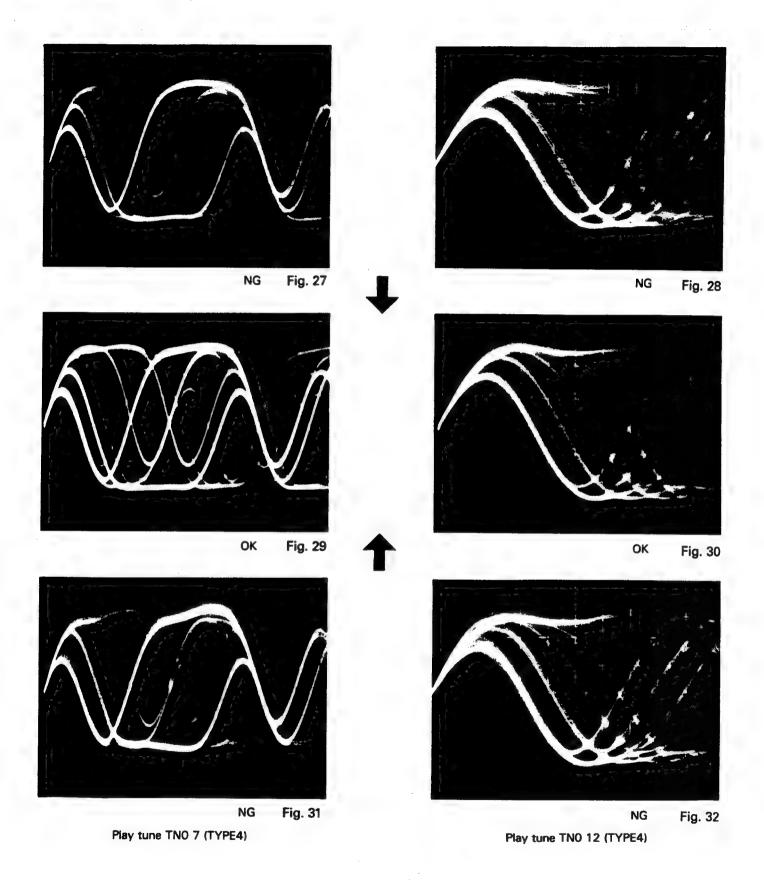


Fig. 26

Adjustment Procedure (with R379 removed)

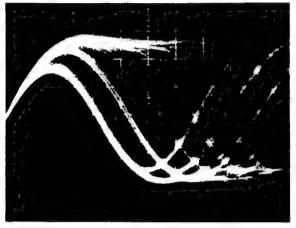
- 1. Remove R379 (but reconnect after completing adjustment).
- 2. Play tune TNO 7 in normal mode. (TYPE 3: TNO 23)
- 3. Check that the valley at the 11T section of the RF waveform is flat.
- 4. If out of adjustment, readjust to obtain a flat RF waveform. (See Fig. 27-32) Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.)
- 5. Switch the power OFF and reconnect R379.
- 6. Apply "screw-lock" to the tangential adjustment screw.
- 7. After adjusting tangential skew, also adjust the grating.
- 8. If tangential skew is seriously out of adjustment, carriage stopping and run-away tend to occur in normal mode. In this case,
- a) Switch to test mode,
- b) Shift the pick-up to signal surface center using FF or REW key.
- c) Press the P.MODE key to close focus.
- d) Press the SCAN key to close the tracking.

- e) Observe RFO in respect to VC, and turn the tangential adjustment screw to obtain a flat waveform at the 11T
- f) Repeat the adjustment resuming from step 2.

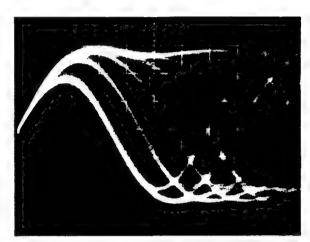


Adjustment Procedure (without R379 removed)

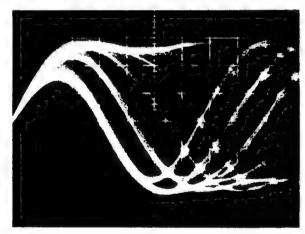
- 1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
- 2. Turn the tangential adjustment screw to obtain a good RF waveform eye pattern. Turn the adjustment screw both clockwise and counterclockwise to points where the eye pattern deteriorates, and take the midway point as the adjustment point. As a general guide, look for an overall clear waveform, and one of the diamond shapes in the eye pattern. The diamond shapes should appear in fine lines at the point of optimum adjustment. Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.) (See Fig. 33-35)
- 3. Apply "screw-lock" to the tangential adjustment screw.
- 4. After adjusting tangential skew, also adjust the grating.



NG Fig. 33



OK Fig. 34



NG Fig. 35



7.8 Grating Adjustment

- Purpose: The grating may need adjustment in a replaced pick-up assembly.
- Maladjustment symptoms: No disc playback; track jumping
- Measuring equipment/ jigs
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope, clock driver, grating adjustment filter (bandpass filter),
 AC millivoltmeter, two low-pass filters
- TEY, E LPF output, F LPF output
- SONY TYPE 4 (or TYPE 3) Test mode
- Pick-up grating adjustment hole

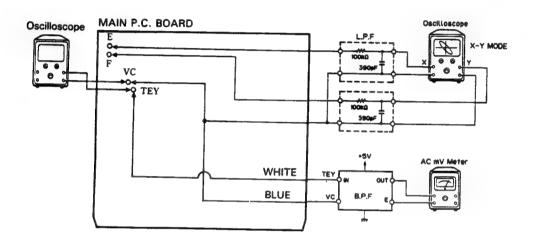


Fig. 36

- Connect a low-pass filter (100k, 390p) to test points E, F, and VC as shown in the above diagram.
- 2. Switch regulator ON in test mode, and load a disc.
- 3. Press the P.MODE key to close focus.
- 4. Press the SCAN key to close tracking.
- Press the FF or REW key, move the pick-up to about the center of the signal surface (tune TNO 6). (TYPE 3: TNO 7)
- 6. Press the SCAN key to open tracking.
- 7. While monitoring the TEY filter output by AC milli-voltmeter, turn the grating adjustment hole slowly. The AC voltage increases and decreases while turning the screw. Search for the minimum voltage level. (This corresponds to the position where the grating is on a track, and is referred to as the null point.)
- Then while monitoring TEY by oscilloscope, turn the driver slowly clockwise from the null point (as seen from under the lens) until the first waveform peak amplitude is reached. (See Fig. 38-43)



- 9. With the E low-pass filter output connected to the X axis of the oscilloscope, and the F low-pass filter output connected to the Y axis, apply an input in AC mode and observe the Lissajous figure.
- 10. Using the driver, adjust the Lissajous figure to a single line (or as close as possible).
- 11. Switch regulator OFF and remove the filters.

B.P.F.

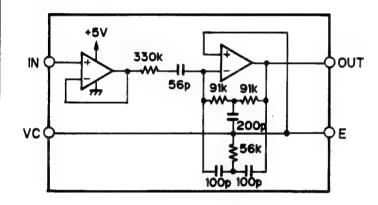
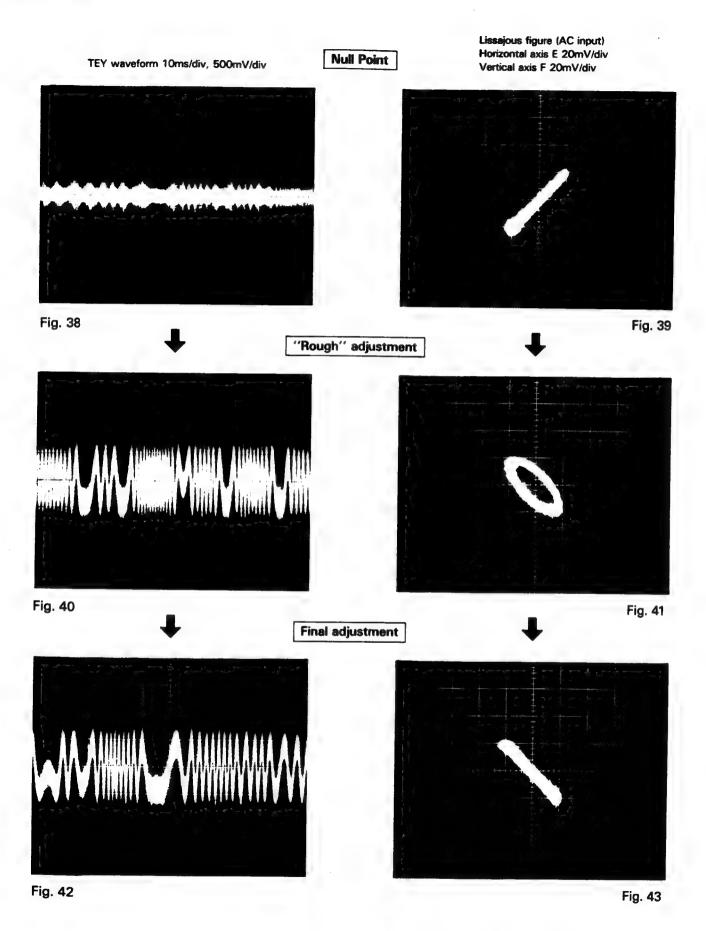


Fig. 37





7.9 Focus Bias Adjustment

Purpose: To adjust the focus servo bias to an optimum value

Maladjustment symptoms: Focus closing difficulty, poor playability

- Measuring equipment/ iigs
- Measuring point
- Test disc and setting
- Adjustment position
- Oscilloscope
- RFO
- SONY TYPE 4 (or TYPE 3) Normal mode
- VR352-1 (FEB)

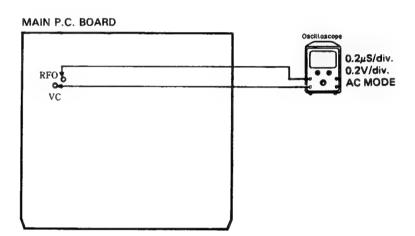
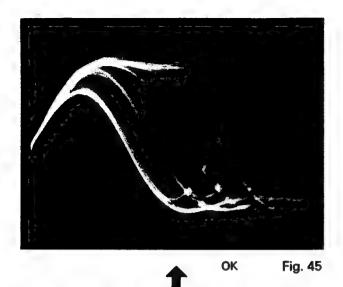


Fig. 44

- 1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
- 2. Observe RFO in respect to VC in the oscilloscope, and adjust VR352-1 (FEB) to obtain maximum RF and optimum eye pattern. (See Fig. 45 and 46)







Before adjustment

Fig. 46



Fig. 47

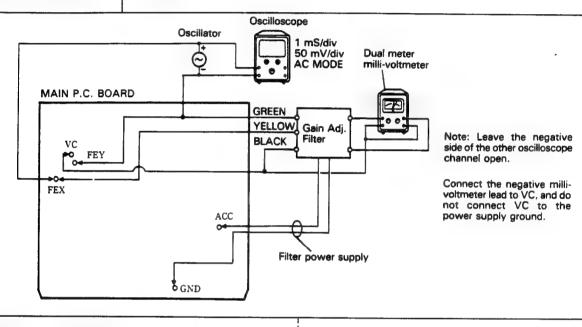
7.10 Focus Servo Loop Gain Adjustment

Purpose: To adjust the focus servo loop gain to an optimum value

Maladjustment symptoms: Poor playability, reduced resistance to vibration, focus closure fails readily

 Measuring equipment/ jigs

- Measuring point
- Test disc and setting
- Adjustment position
- · Oscillator, gain adjustment filter, dual meter milli-voltmeter Same as for CDX-2
- FEX, FEY
- SONY TYPE 4 (or TYPE 3) Normal mode
- VR351-3 (FG)

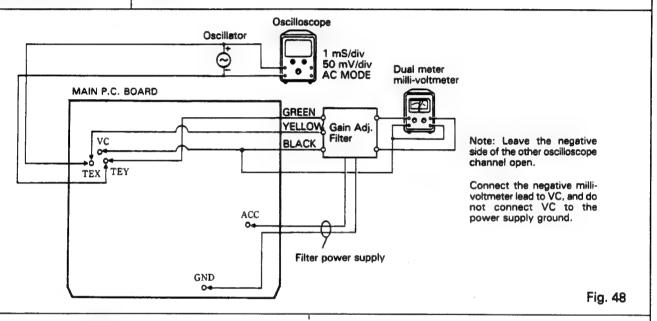


- 1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
- 2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
- 3. Set the oscillator to 1kHz, and observe the FEX/FEY output in the oscilloscope. Adjust the oscillator output to obtain a FEX/FEY output of 200mVp-p.
- 4. Adjust VR351-3 (FG) to obtain a milli-voltmeter difference of 0 ± 0.5 dB.



7.11 Tracking Servo Loop Gain Adjustment

- Purpose: To adjust the tracking servo loop gain to an optimum value
- Maladjustment symptoms: Poor playability, reduced resistance to vibration
- Measuring equipment/ jigs
- Measuring point
- Test disc and setting
- Adjustment position
- · Oscillator, gain adjustment filter, dual meter milli-voltmeter
- TEX, TEY
- SONY TYPE 4 (or TYPE 3) Normal mode
- VR351-2 (TG)



- 1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
- 2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
- Set the oscillator to 1.4kHz, and observe the TEX/TEY output in the oscilloscope. Adjust the oscillator output to obtain a TEX/TEY output of 200mVp-p.
- Adjust VR351-2 (TG) to obtain a milli-voltmeter difference of 0 ± 0.5dB.



7.12 TE Offset Adjustment - II

Purpose: To adjust the electrical offset of the tracking servo to zero.

Maladjustment symptoms: Search times too long, carriage run-away

 Measuring equipment/ iigs

- DC voltmeter
- Measuring point
- ivicasuring point
- Test disc and setting
- Adjustment position
- TAO low-pass filter output
- No disc
- Test mode
- VR352-2

Adjustment Procedure

Same as for TE offset adjustment - I, but with the DC voltage of the TAO LPF output adjusted to 0 ± 50 mV.

The purpose of this additional adjustment is to correct any deviations generated when carrying out the tracking balance and tracking servo loop gain adjustments after completing TE offset adjustment - I.



7.13 Tracking Balance Adjustment - II

● Purpose: To adjust the tracking servo offset to zero.

● Maladjustment symptoms: Search times too long, poor playability, carriage run-away

 Measuring equipment/ iias Oscilloscope

- Measuring point
- TEY low-pass filter output
- Test disc and setting
- SONY TYPE 4 (or TYPE 3) Test mode
- Adjustment position
- VR351-1

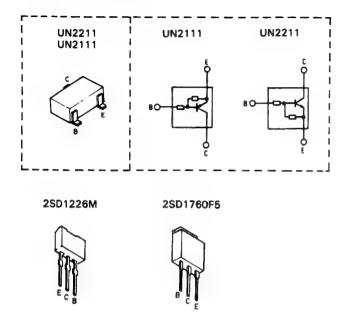
Adjustment Procedure

Steps 1 thru 5 same as tracking balance adjustment-l.

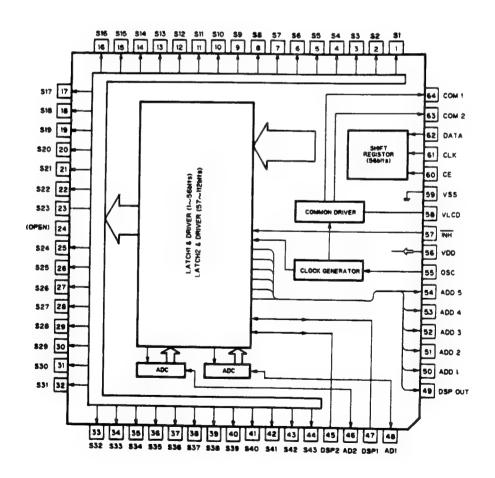
- Check that the level difference between the positive and negative amplitudes of the TEY signal is within 5% (See Fig. 23-25). If greater than 5%, adjust with VR351-1.
- 7. If further adjustment was necessary in step 6, repeat TE offset adjustment - II.

2SB822F

ICs and Transistors



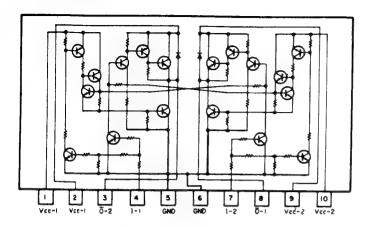
IC901:LC7582P



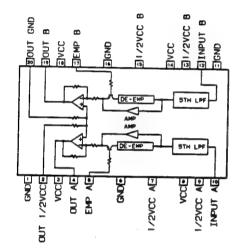
2SD1048



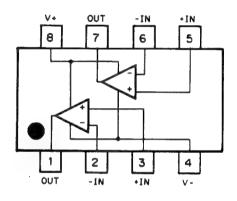
IC754:M54546L



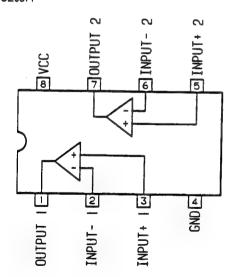
IC704:KHA221A



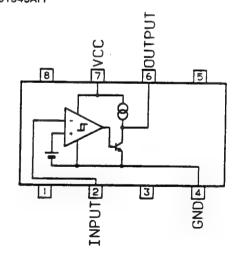
IC655,657,658:M5218FP



IC656:M5233FP



IC753:M51945AFP

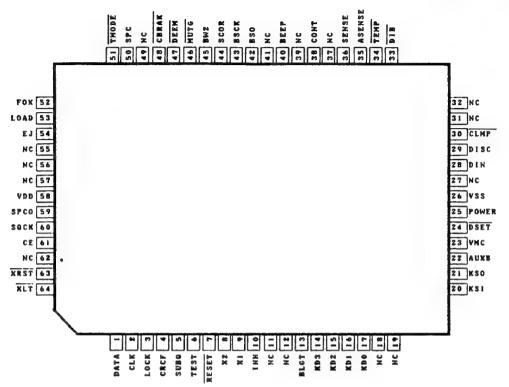




*IC751:PD4177A

IC's marked by * are MOS type.

Be careful in handling them because they are very liable to be damaged by electrostatic induction.



• Pin Functions (PD4177A)

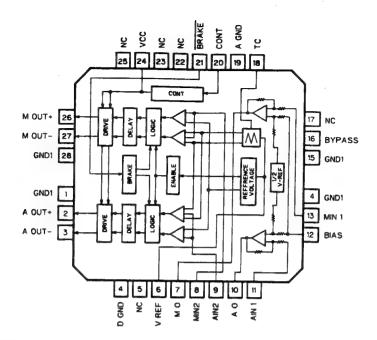
Pin No.	Pin Name	1/0	Fu	nction and	Operation		
1	DATA	CMOS OUT	Serial data output.				
2	CLK	CMOS OUT	Serial data clock output.				
3	LOCK	CMOS IN	Spindle lock monitor.		"H = Lock		
4	CRCF	CMOS IN	CRC check result input.		"H" = CRC O	K	
5	SUBQ	CMOS IN	Sub-code data input.				
6	TEST	CMOS IN	Test input.				
7	RESET	CMOS IN	Reset input.				
8	X2	CMOS OUT	Oscillator output.				
9	X1	CMOS IN	Oscillator input.	•			
10	INH	CMOS OUT	Display driver control		"L" = Light O	FF	
13	BLGT	CMOS OUT	LCD back light control output.		"H" = ON		
14	KD3	INPUT	Key matrix input.		T T		
15	KD2	INPUT	1		KD3, KD2	KD1	KD0
16	KD1	INPUT	1	KS0	TR+	TR-	PLAY
17	KDO	INPUT	1	KS1	P-MODE	SCAN	EJ/ST)P
20	KS1	CMOS OUT	Key matrix output.	***************************************			
21	KSO	CMOS OUT					
22	AUXB	CMOS OUT	AUXB output.			***	
23	VMC	CMOS OUT	Loading power supply control.				
24	DSET	CMOS OUT	Disc set LED control.				
25	POWER	CMOS IN	Regulator ON/OFF control.		"H" = Regulat	or ON	



Pin No.	Pin Name	1/0	Function ar	nd Operation			
26	VSS				•		
28	DIN	CMOS IN	Door switch input.	"H" = Door o	pen		·
29	DISC	CMOS IN	Disc sensor input.	"H" = Disc lo	·		
30	CLMP	CMOS IN	Disc clamped input.	"L" = Disc c	lamped		
33	DIB	INPUT	DIB input. Disable +B sense.				
34	TEMP	INPUT	High temperature detector.				
35	ASENSE	CMOS IN	ACC sense input.	"H" = ACC C	N		
36	SENSE	CMOS IN	CD LSI internal status monitor input.				
38	CONT	CMOS OUT	PWM driver ON/OFF.	"H" = ON			
40	BEEP	CMOS OUT	Beep output. f=4kHz				
42	BSO	CMOS OUT	Display driver serial data output.				
43	BSCK	CMOS OUT	Display driver serial clock output.				
44	SCOR	CMOS IN	Sub-code synchronization input.				
45	BW2	OUTPUT	Spindle motor output filter time constant se High resistivity N channel open drain	election output	•		
46	MUTG	OUTPUT	Muting output. High resistivity N channel open drain	"L" = Mute 0	N		
47	DEEM	OUTPUT	Emphasis selector output. High resistivity N channel open drain	"H" = Empha	sis ON	-	
48	CBRAK	OUPUT	PWM driver brake control. High resistivity N channel open drain	"L" = Brake C	N		
50	SPC	CMOS IN	Spindle motor rpm sensor circuit.	"L" = Low sp	eed		
51	TMODE	OUTPUT	Test mode input.				
52	FOK	CMOS IN	Indication that focus is closed and RF input	is active.			
53	LOAD	OUTPUT	Motor drive output.	LOAD	н	L	Н
54	EJ		High resistivity	EJ	L	Н	Н
			N channel open drain		Load	Eject	Stop
58	VDD	_					<u> </u>
59	SPCO	CMOS OUT	Spindle motor rpm sensor circuit ON/OFF.	"H" = Brake			
60	SQCK	CMOS OUT	Sub-code clock.				
61	CE	CMOS OUT	Display driver select.				
63	XRST	CMOS OUT	CD LSI reset output .	"L" = Reset			
64	XLT	CMOS OUT	Serial data latch output.				



IC651,652:PA3023

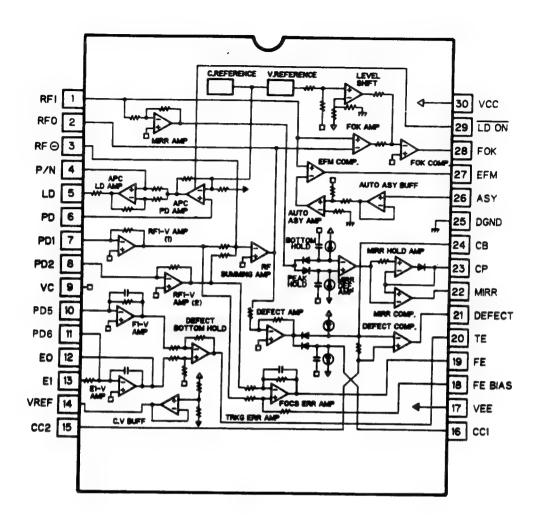


Pin Functioons (PA3023)

Pin	Pin Name	1/0	Function and Operation
1	GND1	_	Sub GND.
2	AOUT +	Output	Positive actuator drive output.
3	AOUT -	Output	Negative actuator drive output.
4	DGND	-	Power stage GND.
5	NC	_	
6	Vref	_	IC stabilizing reference voltage output.
7	МО	Output	Analog signal output for motor.
8	MIN2	Input	Analog signal input 2 for motor.
9	AIN2	Input	Analog signal input 2 for the actuator.
10	AO .	Output	Analog signal output for the actuator.
11	AIN1	input	Analog signal input 1 for the actuator.
12	BIAS	_	External bias input pin.
13	MIN1	Input	Analog signal input 1 for the motor.
14	GND1	-	Sub GND.
15	GND1	_	Sub GND.
16	BYPASS	_	Ripple filter condensor connection pin for IC stabilizing reference voltage.
17	NC	-	
18	TC	_	Condenser connection pin for obtaining triangle waveform.
19	AGND	-	Small signal GND.
20	CONT	Input	Circuit operation/standby switch input. Active H
21	BRAKE	Input	Motor operation/non-operation switch input. Active L
22	NC	-	
23	NC	_	
24	Vcc	_	ACC power supply.
25	NC	-	
26	MOUT +	Output	Positive motor driver output.
27	MOUT -	Output	Negative motor driver output.
28	GND1	_	Sub GND



*IC351 : CXA1081M



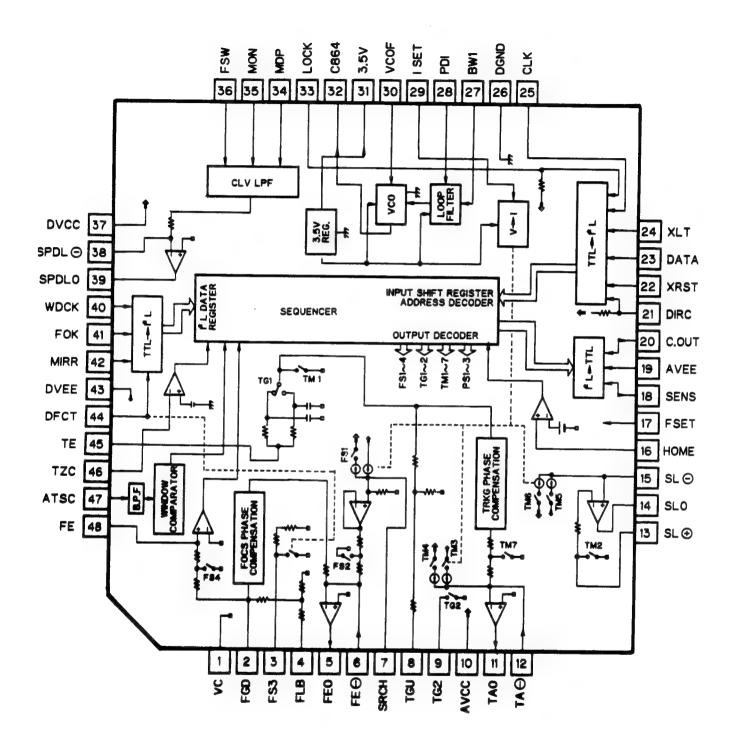


● Pin Functions (CXA1081M)

Pin No.	Pin Name	1/0	Function and Operation
1	RFI	Input	Input of capacitance-coupled RF summing amplifier output
2	RFO	Output	RF summing amplifier output pin - eye pattern check point
3	RF-	Input	RF summing amplifier feedback input pin
4	P/N	Input	Laser diode P-sub/N-sub selector pin
5	LD	Output	APC LD amplifier output pin
6	PD	Input	APC PD amplifier input pin
7	PD1	Input	RF I-V amplifier (1) inverter input pin - connected to photodiode A + C pin for current input
8	PD2	Input	RF I-V amplifier (2) inverter input pin - connected to photodiode B + D pin for current input
9	VC		Connected to VR
10	F	Input	I-V amplifier inverter input pin - connected to photodiode for current input
11	E	Input	I-V amplifier inverter input pin - connected to photodiode for current input
12	EO	Output	E I-V amplifier output pin
13	El	Input	E I-V amplifier feedback input pin for E I-V amplifier gain adjustment
14	VR	Output	(V _{CC} + V _{EE})/2 DC voltage output pin
15	CC2	Input	Input of capacitance-coupled DEFECT bottom hold output
16	CC1	Output	DEFECT bottom hold output pin
17	VEE		Ground connection
18	FE BIAS	Input	Focus error amplifier non-inverting bias pin Used in focus error amplifier CMR adjustment
19.	FE	Output	Focus error amplifier output pin
20	TE	Output	Tracking error amplifier output pin
21	DEFECT	Output	DEFECT comparator output pin
22	MIRR	Output	MIRR comparator output pin
23	СР	Input	MIRR hold capacitor connector pin - MIRR comparator non-inverting input pin
24	СВ	Input	DEFECT bottom hold capacitor connector pin
25	DGND		Ground connection
26	ASY	Input	Auto asymmetry control input pin
27	EFM	Output	EFM comparator output pin
28	FOK	Output	Focus OK comparator output pin
29	LDON	Input	Laser diode ON/OFF switching
30	VCC		Positive power supply pin



*IC601:CXA1082AQ





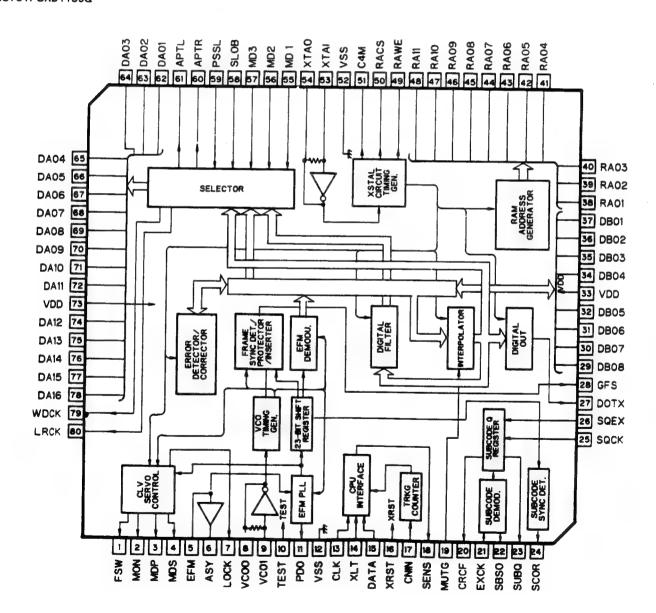
● Pin Functions (CXA1082AQ)

Pin No.	Pin Name	1/0	Function and Operation
1	VC		Servo reference voltage input pin
2	FGD		Connect to pin 3 to switch focus servo OFF when defect occurs
3	FS3		Internal DFCT switch closed when pin 44 is high
4	FLB		Focus servo low region boost external time constant pin
5	FEO	Output	Focus drive output - connect to low-end equalizer
6	FE-	Input	Focus amplifier inverter input pin
7	SRCH		Focus search waveform generation external time constant connector pin
8	TGU	Output	Tracking low-end equalizer connection output pin
9	TG2		Pin 7 discharge switch for starting focus search from lens center
10	AVCC		+ 5V connection
11	TAO	Output	Tracking drive output
12	TA-	Input	Tracking amplifier inverter input pin
13	SL+	Input	Sled amplifier non-inverting input pin
14	SLO	Output	Sled drive output
15	SL-	Input	Sled amplifier inverter input pin
16	HOME	Input	Sled home position detector switch input pin
17	FSET	,	Focus/tracking phase compensation peak and CLV low-pass filter fo setting pin
18	SENS	Output	Output of FZC, AS, TZC, SSTOP, and BUSY depending on command from CPU
19	AVEE		AGND connection
20	COUT	Output	Track counter signal output
21	DIRC		Not used
22	XRST	Input	Reset input pin - reset when "L"
23	DATA	Input	Serial data input from CPU
24	XLT	Input	Latch input from CPU
25	CLK	Input	Serial data transfer clock input from CPU
26	DGND		DGND connection
27	BW1		Loop filter external time constant pin
28	PDI	Input	Input of CXD1135 phase comparator output PDO
29	ISET		Current which determines focus search, track jump, and sled kick height
30	VCOF		VCO free-running frequency more or less inversely
31	3.5∨	Output	Proportional to resistance value between pins 30 and 31
32	C864	Output	8.64MHz VCO output pin
33	LOCK		Not used
34	MDP		Connect to MDP pin of CXD1135
35	MON		Connect to MON pin of CXD1135
36	FSW	-	CLV servo error signal low-pass filter external time constant pin
37	DVCC		+ 5V connection
38	SPDL-	Input	Spindle drive amplifier inverter input pin



Pin No.	Pin Name	1/0	Function and Operation
39	SPDLO	Output	Spindle drive output
40	WDCK	Input	Auto-sequence clock input 176.4kHz
41	FOK	Input	FOK signal input pin
42	MIRR	Input	Mirror signal input pin
43	DVEE		DGND connection
44	DFCT	Input	DEFECT signal input pin - defect countermeasure circuit activated when this input is high
45	TE	Input	Tracking error signal input pin
46	TZC	Input	Tracking zero-cross comparator input pin
47	ATSC	Input	Tracking lens offset detector window comparator input pin
48	FE	Input	Focus error signal input pin

*IC701: CXD1135Q

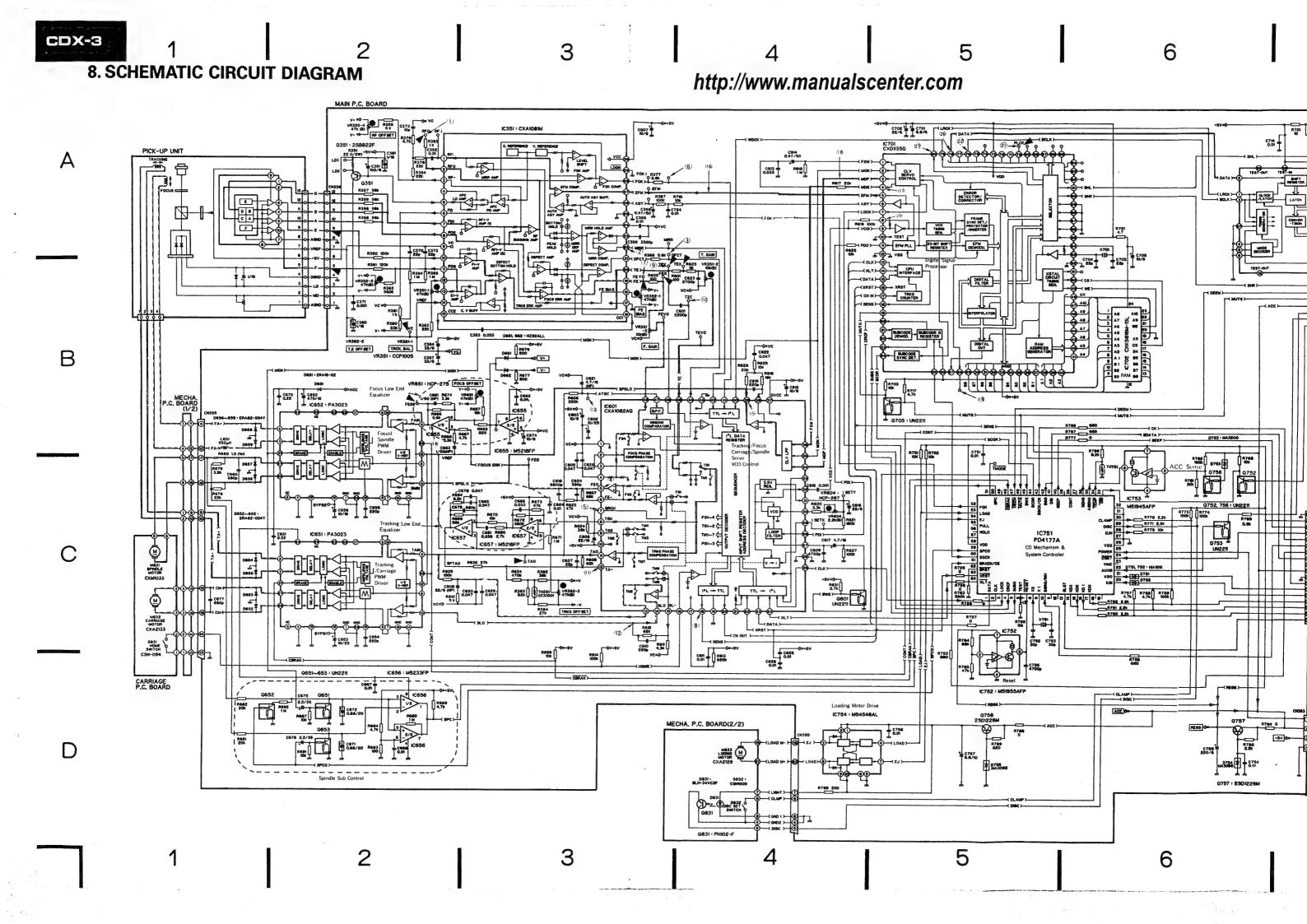


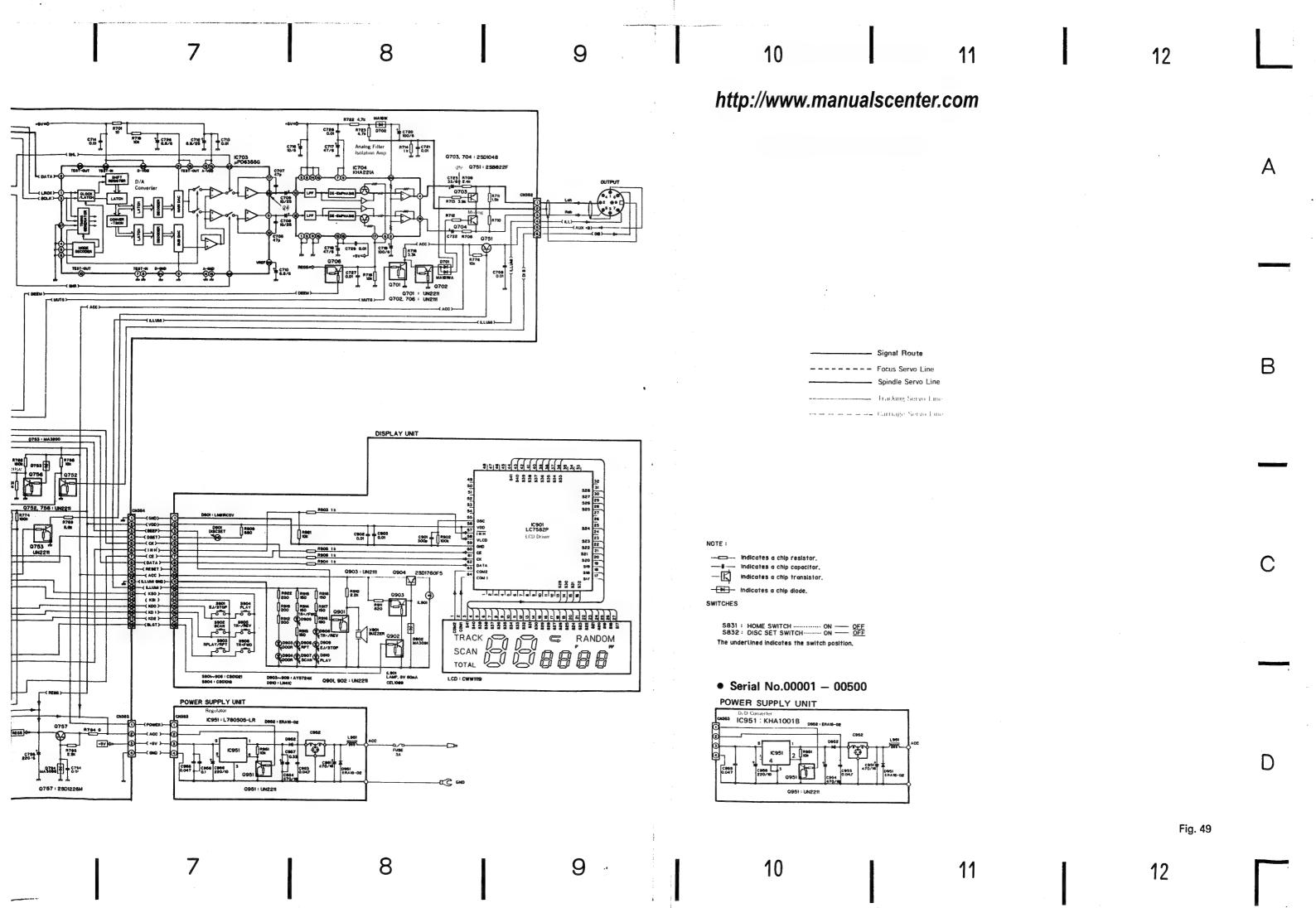


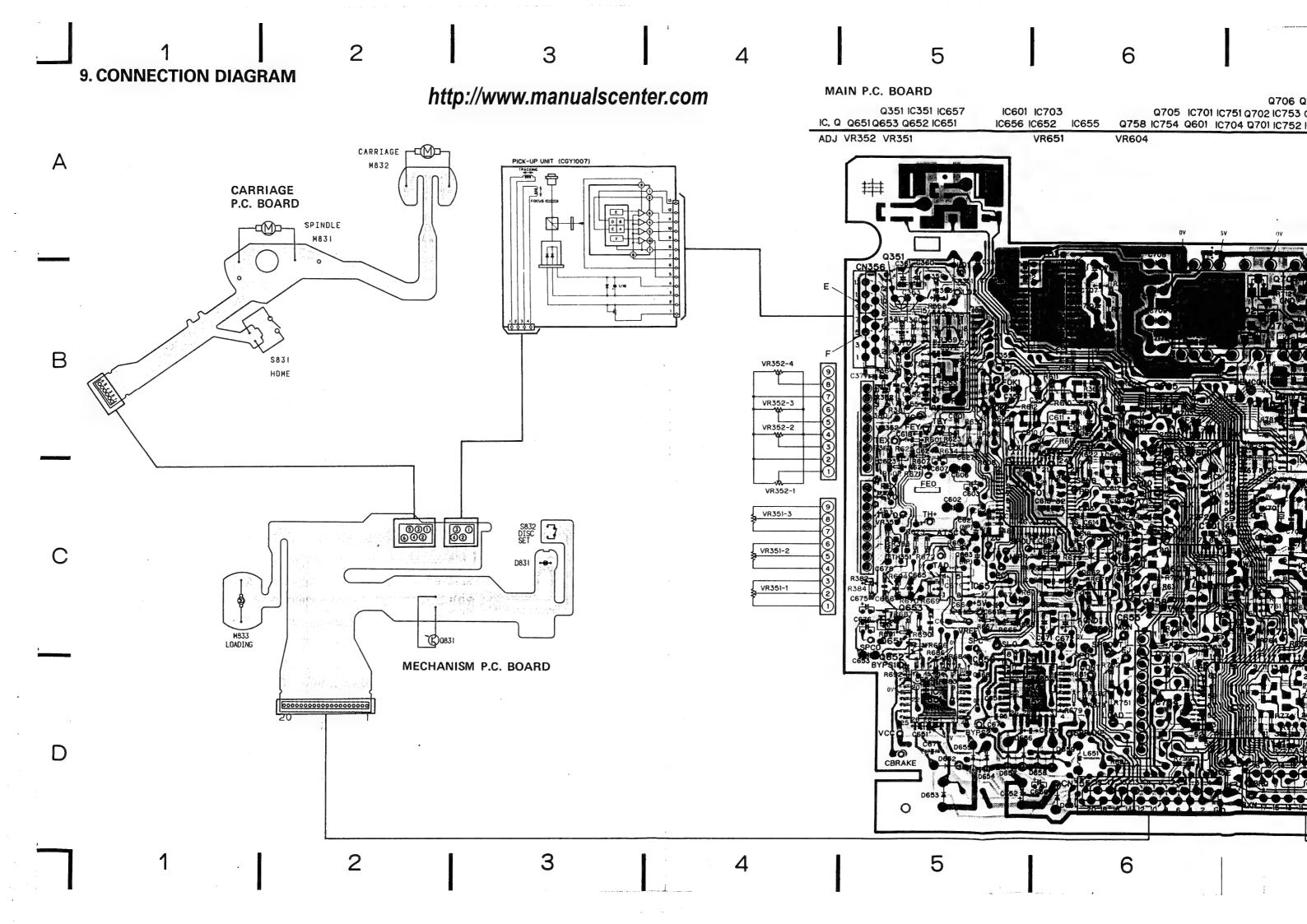
● Pin Functions (CXD1135Q)

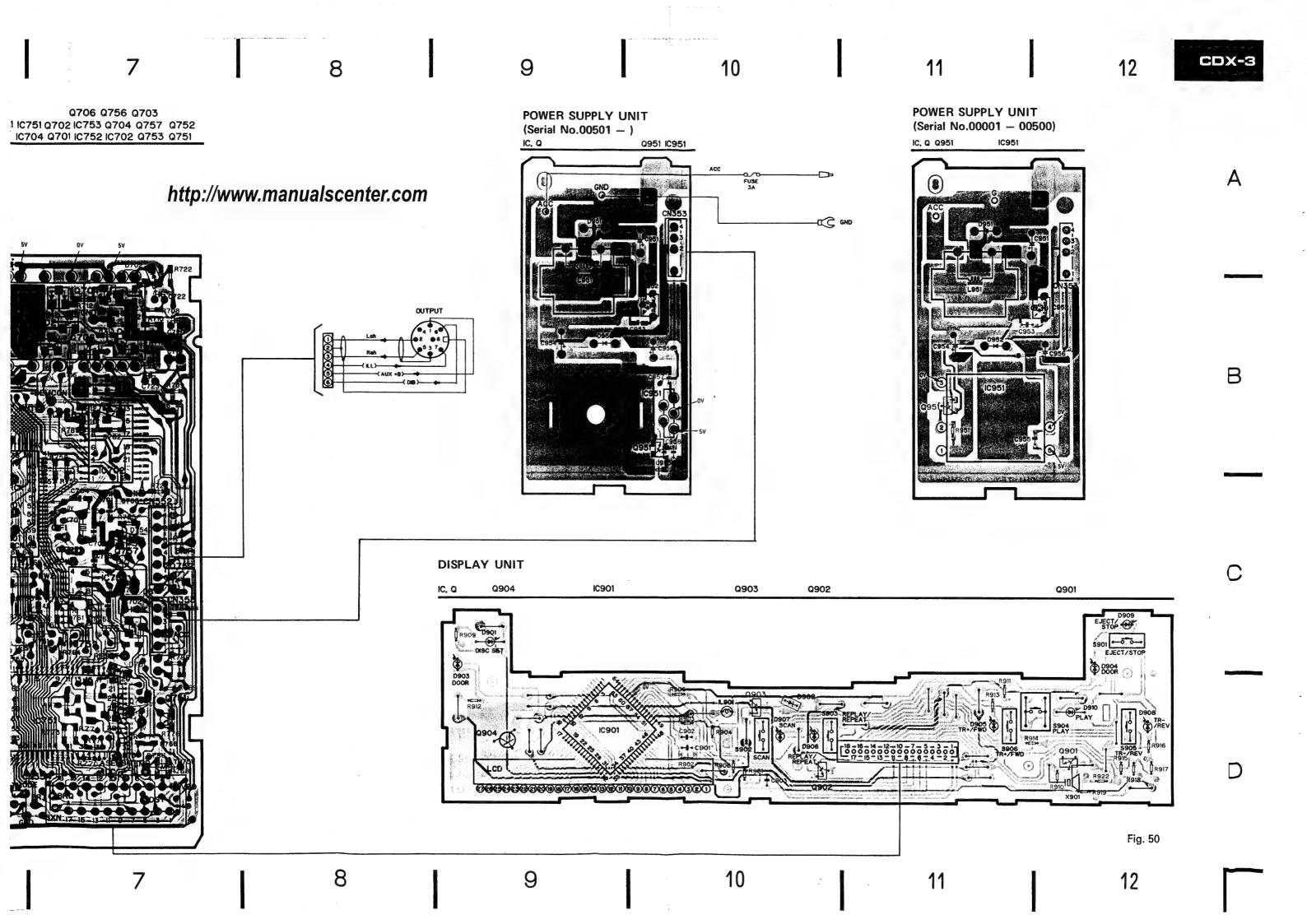
Pin No.	Pin Name	1/0	Function and Operation
1	FSW	Output	Spindle motor output filter time constant selector output
2	MON	Output	Spindle motor ON/OFF control output
3	MDP	Output	Spindle motor drive output - "rough" control in CLV-S mode, and phase control in CLV-P mode
4	MDS	Output	Spindle motor drive output - speed control in CLV-P mode
5	EFM	Input	EFM signal input from RF amplifier
6	ASY	Output	EFM signal slice level control output
7	LOCK	Output	Sampling of GF\$ signal by WFCK/16 - "H" output if "H", "L" output if "L" detected eight times in succession
8	vcoo	Output	VCO output - f = 8.6436MHz when EFM signal is locked
9	VCOI	Input	VCO input
10	TEST	Input	(OV)
11	PDO	Ouptut	EFM signal and VCO/2 phase comparison output
12	Vss	_	Ground (OV)
13	CLK	Input	Serial data transfer clock input from CPU - data latched by clock leading edge
14	XLT	Input	Latch input from CPU - 8-bit shift register data (serial data from CPU) is latched in each register.
15	DATA	Input	Serial data input from CPU
16	XRST	Input	System reset signal input - reset when "L"
17	CNIN	Input	Tracking pulse input
18	SENS	Output	Output of internal status according to address
19	MUTG	Input	Muting input - when ATTM of internal register A is "L", MUTG "L" denotes normal status, and "H" muted status
20	CRCF	Output	Sub-code Q CRC check result output
21	EXCK	Input	Clock input for sub-code serial output
22	SBSO	Output	Sub-code serial output
23	SUBQ	Output	Sub-code Q output
24	SCOR	Output	Sub-code synchronizing S0+S1 output
25	SQCK	input/Output	Sub-code Q read clock
26	SQEX	Input	SQCK selector input
27	DOTX	Output	Digital out output (WFCK output)
28	GFS	Output	Frame synchronizing lock status indicator output
29	DB08	Input/Output	External RAM data pin - DATA8 (MSB)
30	DB07	Input/Output	External RAM data pin - DATA7
31	DB06	Input/Output	External RAM data pin - DATA6
32	DB05	Input/Output	External RAM data pin - DATA5
33	V _{DD}	-	Power supply (+5V)
34	DB04	Input/Output	External RAM data pin - DATA4
35	DB03	Input/Output	External RAM data pin - DATA3

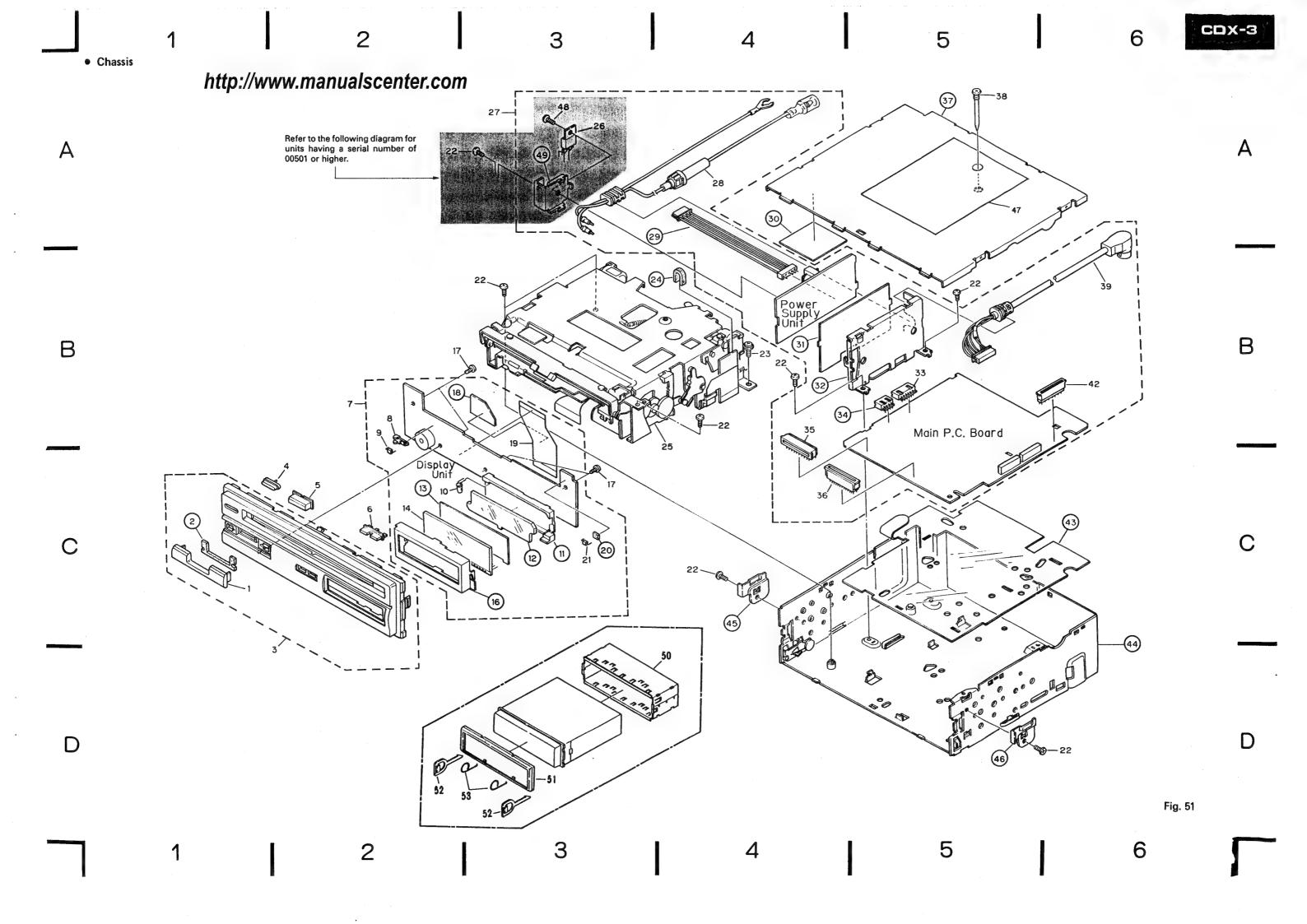
Pin No.	Pin Name	1/0	Function and Operation
36	DB02	Input/Output	External RAM data pin - DATA2
37	DB01	Input/Output	External RAM data pin - DATA1 (LSB)
38	RA01	Output	External RAM address output - ADDR01 (LSB)
39	RA02	Output	External RAM address output - ADDR02
40	RA03	Output	External RAM address output - ADDR03
41	RA04	Output	External RAM address output - ADDR04
42	RA05	Output	External RAM address output - ADDR05
43	RA06	Output	External RAM address output - ADDR06
44	RA07	Output	External RAM address output - ADDR07
45	RA08	Output	External RAM address output - ADDR08
46	RA09	Output	External RAM address output - ADDR09
47	RA10	Output	External RAM address output - ADDR010
48	RA11	Output	External RAM address output - ADDR011 (MS8)
49	RAWE	Output	External RAM write enable signal output (active "L")
50	RACS	Output	External RAM chip select signal output (active "L")
51	C4M	Output	X'tal frequency division output (f = 4.2336MHz)
52	Vss	_	Ground (OV)
53	XTAI	Input	Crystal oscillator input (f = 8.4672MHz)
54	XTAO	Output	Crystal oscillator output (f = 8.4672MHz)
55	MD1	Input	Mode selector input 1
56	MD2	Input	Mode selector input 2
57	MD3	Input	Mode selector input 3
58	SLOB	Input	Audio data output code selector input - 2's complement output if "L", offset binary output if "H"
59	PSSL	Input	Audio data output mode selector input - serial output if "L", parallel output if "H"
60	APTR	Output	Aperture correction control output - "H" when right channel
61	APTL	Output	Aperture correction control output - "L" when left channel
62	DA01	Output	C1F1 output
63	DA02	Output	C1F2 output
64	DA03	Output	C2F1 output
65	DA04	Output	C2F2 output
66	DA05	Output	C2FL output
67	DA06	Output	C2PO output
68	DA07	Output	RFCK output
69	DA08	Output	WFCK output
70	DA09	Output	PLCK output
71	DA10	Output	UGFS output
72	DA11	Output	GTOP output

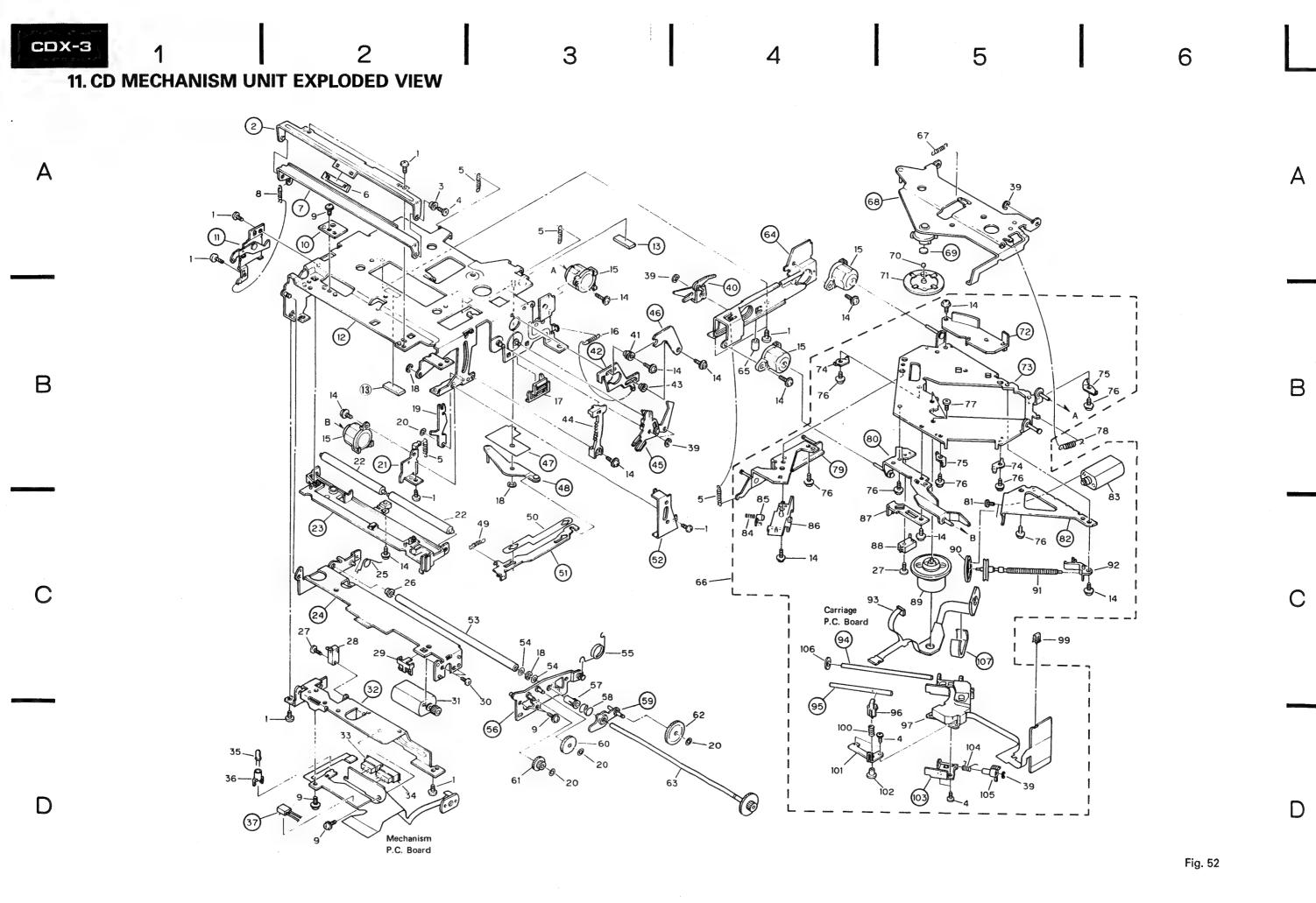












2 3 4 5 6

Pin No.	Pin Name	1/0	Function and Operation
73	V _{DD}	_	Power supply (+5V)
74	DA12	Output	RAOV output
75	DA13	Output	C4LR output
76	DA14	Output	C210 output
77	DA15	Output	C210 output
78	DA16	Output	DATA output
79	WDCK	Output	Strobe signal output (176.4kHz)
80	LRCK	Output	Strobe signal output (88.2kHz)

Note:

C1F1: C1 decoding error correction status monitor output

C2F1: 7 62 days disc

C2 decoding error correction status monitor output

C2F2: Corrected s

Corrected status output - "H" if C2 system currently being corrected cannot be corrected

C2PO: C2 pointer indication output - synchronized with audio data output

RFCK: Read frame clock output - crystal oscillator 7.35kHz

WFCK: Write frame clock output - f = 7.35kHz when crystal oscillator is locked

PLCK: VCO/2 output - f = 4.3218MHz when EFM signal is locked

UGFS: Unprotected frame synchronizing pattern output

GTOP: Frame synchronization protection status indicator output

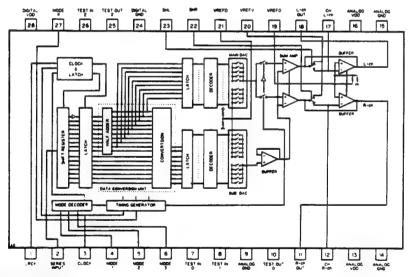
RAOV: ±4 frame jitter absorption RAM overflow and underflow indicator output

C4LR: Strobe signal - 176.4kHz

C210: C210 inverting output

C210: Bit clock output - 2.1168MHz DATA: Audio signal serial data output

*IC703: µPD6355G

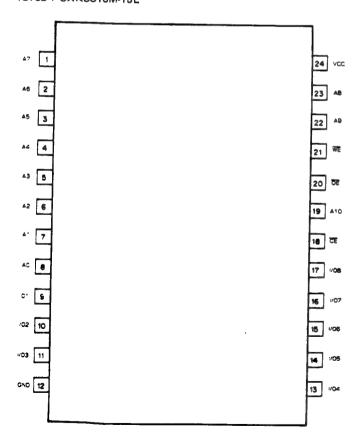


• Pin Functions (μPD6355G)

Pin No.	Pin Name	1/0	Function and Operation	
1	LRCK	Input	Input data left/right discriminator signal input pin "L" = Left, "H" = Right	
2	SI	Input	Serial data input pin	
3	CLK	Input	Serial input data read clock input pin	
4-6	M1-M3	Input	Input data mode selector pin	

Pin No.	Pin Name	1/0	Function and Operation
7,8	Tlo, Tl	Input	Test pins
9	A-GND		Analog stage ground pin
10	TOO	Output	Test pin
11	ROUT	Output	Right channel analog signal output pin
12	CHR	Output	Right channel analog signal sample hold capacitor pin
13	A·VDD		Analog stage power supply pin
14,15	A-GND		Analog stage ground pins
16	A·VDD		Analog stage power supply pin
17	CHL	Output	Left channel analog signal sample hold capacitor pin
18	LOUT	Output	Left channel analog signal output pin
19	VREFO		Operation amplifier reference connection
20	VREFV		Connection to AGND via capacitor
21	VREFD		Connection to resistance ladder
22	SHR	Input	Right channel analog output sample hold timing signal Active high
23	SHL	Input	Left channel analog output sample hold timing signal Active high
24	D·GND		Logic stage ground pin
25	TO2	Output	Test pin
26	TI2	Input	Test pin
27	M4	Input	Internal logic clock selection which determines whether input from CLK pin is to be divided or not "H": No division, "L": Divide by 2
28	D·VDD		Logic stage power supply pin

*IC702 : CXK5816M-15L



http://www.manualscenter.com

▶ Circuit Diagram Symbols

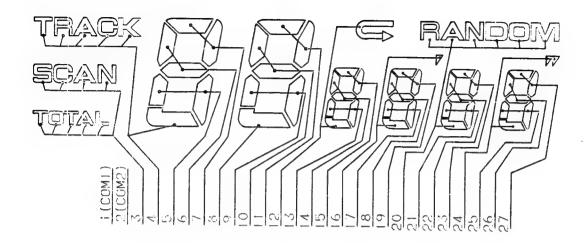
Symbol	Function	Symbol	Function
Α	1/4 division detector output used in detection of	FEO2	Focus 2 (1C655 pin no.1)
	RF and focus signal	FLOAT	Carriage mechanism play position detector signal
ACC	14.4V	HOME	Home position detector signal (pick-up at home
AGND	Analog ground		position when "L")
ASY	Asymmetry	IN1	Motor control signal 1
ATSC	Anti-shock (carriage motor control during playback)	IN2	Motor control signal 2
В	1/4 division detector output used in detection of	IN3	Motor control signal 3
	RF and focus signal	ISETY	ISET resistance pin (IC601 pin no.31)
BATT	14.4V (Constant power supply)	LAMP	Photo-interrupter drive signal
BDATA	Bus data signal	LD	Laser diode
BRST	Bus reset signal	LOAD	Disc loading power supply ON/OFF signal
BRXEN	Bus line busy signal	MON	Motor ON (spindle forward or reverse when "H")
BSCK	Bus synchronizing shift clock	MD	Monitor diode
BSRQ	Bus service request line	MUTG	Mute signal (muting ON when "L")
BYPS1	Bypass 1 (non-drive enabled by connecting to ground during PWM IC651 operation)	POWER	Power supply control signal
BYPS2	Bypass 2 (non-drive enabled by connecting to	REG5	+ 5V
D 1 F 32	ground during PWM IC652 operation)	SLO	Carriage output signal (IC601 pin no.14)
С	1/4 division detector output used in detection of	SM+	Spindle motor drive signals (PWM OUT)
	RF and focus signal	SM-	
CBRAKE	PWM driver brake control signal (brake on when "L")	SPC	Spindle motor rpm detector signal (low speed when "L", IC656 pin nos.1 & 7)
CLAMP	Disc set detect signal	SPCO	Spindle brake (spindle brake when "H", IC751
CM+	Carriage motor drive signal (PWM OUT)		pin no. 59)
CM-		SPDLO	Spindle motor error signal (IC601 pin no.39)
CONT	PWM driver ON/OFF signal (ON when "H")	SPTAO	Tracking side path signal output
D	1/4 division detector output used in detection of	SMIN	Spindle motor drive PWM input signal
	RF and focus signal	STBY	Standby position detector signal
DEEM	Emphasis selector switch (emphasis ON when "H")	TA+	Tracking actuator drive signals (PWM OUT)
DFCT	DEFECT signal ("H" when defect)	TA-	
DGND	Digital ground	TAIN	Tracking actuator drive PWM input signal
DISC	Disc presence detector signal	TEND	Mechanism clamped switching line
E	Tracking signal start detector	TGU	Tracking side path input
EFM	8-14 modulation	TIG	Switch ground
EJ	Eject key	TOG	Switch ground
END	Carriage mechanism END position detector signal	TZC	T.E zero-cross signal
F	Tracking signal end detector	vc	Signal reference voltage (2.5V)
FA+	Focus actuator drive signal (PWM OUT)	VREF	Signal reference voltage buffer output (1.5V)
FA -			
FAIN	Focus drive PWM input signal		
		1	

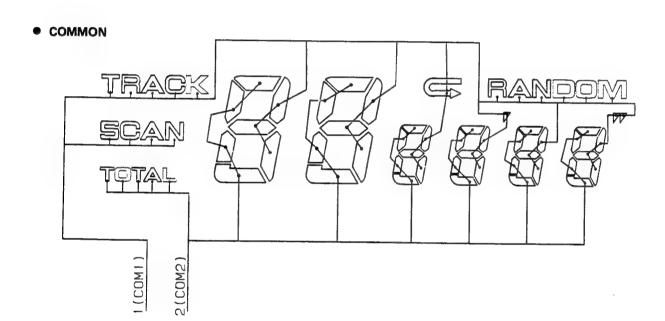
Focus signal output (IC601, CXA1082AQ pin no.5)

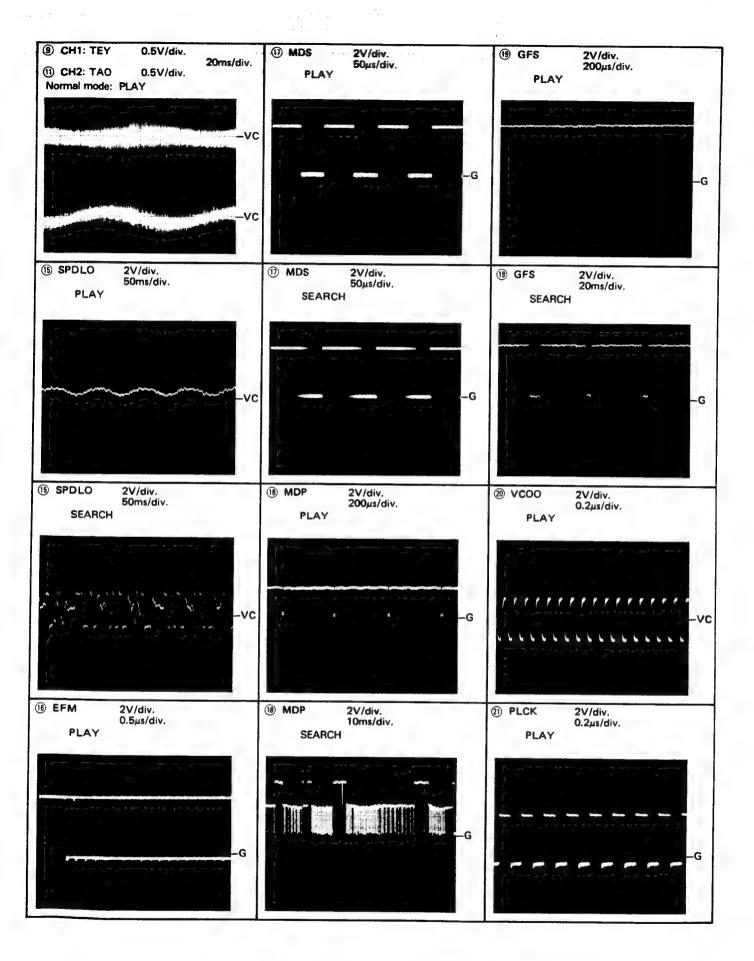


●LCD: CWWII19

• SEGMENT









Wave Forms

Note: 1. The encircled numbers denote measuring points in the circuit diagram.

2. Reference voltage.

G: GND VC: Pin 14 of CXA1081M (2.5V)

① CH1: RFO 0.4V/div. 7 CH1: FEY 1V/div. 9 CH1: TEY 0.4V/div. 0.4ms/div. 4ms/div. 4ms/div. 2 CH2: MIRR 2V/div. 8 CH2: SENS 2V/div (1) CH2: TAO 0.4V/div. Normal mode: Focus close (The lens moves DOWN → UP) Test mode: Tracking open Normal mode: Track search (80 track jump) ① CH1: RFO CH1: TEY CH1: SLO 0.4V/div. 0.4ms/div. 0.4ms/div. 2S/div. 0.02V/div. 3 CH2: DEFECT 2V/div. (II) CH2: TZC 0.4V/div. (13) CH2: ATSC Normal mode: The defect part passes $800\mu m$. Test mode: Tracking open Normal mode: PLAY 4 CH1: FEO 9 CH1: TEY 0.2V/div. 0.4V/div. 1 RFO 0.5V/div. 0.4S/div. 2ms/div. 200ns/div. 6 CH2: Pin 7 of CXA1082AQ 0.04V/div. (1) CH2: TAO 0.4V/div. Normal mode: PLAY Test mode: Connect the FOK2 to GND. Normal mode: Brake wave form when track Focus search is performed. search is performed. (CH2 is the same phase as the iens movement.) 500mU 200ns% 7 CH1: FEY CH1: FOK2 2V/div. CH1: TEY 0.4V/div. 0.5V/div. 0.2S/div. 0.4ms/div. 20ms/div. (4) CH2: FEO 0.2V/div. (1) CH2: TAO 0.4V/div. (4) CH2: FEO2 0.5V/div. Normal mode: Focus close Test mode: Single jump Normal mode: PLAY -vc

10. CHASSIS EXPLODED VIEW

NOTE:

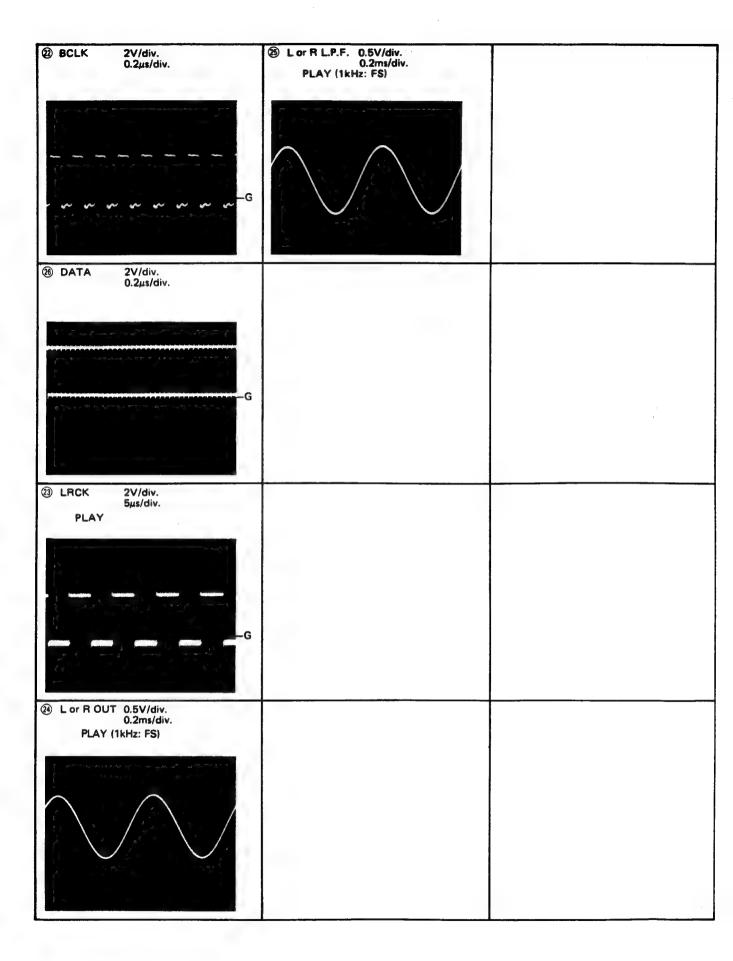
- For your Parts Stock Control, the fast moving items are indicated with the marks
 ★ ★ and ★.
 - * *: GENERALLY MOVES FASTER THAN *.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

- Parts whose parts numbers are omitted are subject to being not supplied.
- Parts marked by "@" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

• Parts List

Mark	No.	Part No. CAC1543	Description	Mark	No.	Part No.	Description
^	1	CAC1784	Button (UC) Button (EW)	•	27	CWX1159 CWX1161	Main Unit(UC) Main Unit(EW)
	2	CXA2520	Cushion	*	28	CDE2254	Cord (UC)
	J	CXA2521	Grille Unit(UC) Grille Unit(EW)		29	CDE2255	Cord (EW) Connector
*	4	CAC1439	Button		30		Insulator
÷	5	CAC1541	Button (UC)		31		Insulator Insulator
*	6	CAC1785 CAC1542	Button (EW)		32	OVO 470	Holder
ô	7	CWX1160	Button Display Unit		33 34	CKS-470	Plug Plug
	0	CHU1C10				01101005	
*	8 9	CNV1610 LN41C	Spacer LED		35 36	CKS1087 CKS1415	Connector Connector
**	10	CEL1089	Lamp		37		Case
	11 12		Holder Lens		38	CBA1094	Screw
	12		Lens		39	CDE2133	DIN Cord
	13		Plate		40		
	14	CWW1119	LCD		41	*****	
	15 16	CNC2301	Contact Holder		42 43	CKS1328	Connector
	17	BPZ20P060FMC	Screw		43		Insulator Chassis Unit
	18		Spacer		45		D
	19	CNP1593	P.C. Board		45 46		Bracket Bracket
	20	2000	Spacer		47	CRP1031	Caution Card
*	21	LN81RC5V	LED		48	BMZ30P050FMC	Screw
	22	BMZ26P040FMC	Screw		4 9		Bracket
	23	PMF26P060FMC	Screw		50	CNC1484	Holder
	24		Cushion		51	CNS1403	Panel
•	25	CXK2200	CD Mechanism Unit		52	CNC1631	Handle
**	26	(CXK2240) L780S05-LR	IC		53	CBH-865	Spring





Mark	91 92 93 94 95	Part No. CXA2375 CNV1781 CNP1709	Description Screw Unit Holder P.C.Board Shaft Shaft	<u>Mark</u>	No. 101 102 103 104 105	Part No. CNC1736 CLA1319 CBH1106 CNV1513	Description Holder Screw Holder Unit Spring Rack
	96 97 98 99 100	CNV1512 ******** CBL1010 CBH1105	Holder PU Unit Short Pin Spring		106 107	CNV1863	Cushion Cover

		CD Mechan	ism Unit	
Mark	No.	CXK2200	CXK2240	Description
•	66 97	CXA1910 CGY1007	CXA2650 CGY1008	Carriage Unit PU Unit

• Parts List

<u>Mark</u>	No. 1 2 3 4 5	Part No. BMZ26P030FMC CLA1311 CBA1062 CBH1182	Description Screw Bracket Collar Screw Spring	<u>Mark</u>	No. 46 47 48 49 50	Part No. CBH1134 CNM2152	Description Holder Spacer Arm Unit Spring Spacer
	6 7 8 9 10	CNV1641 CBH1137 CBA1076	Holder Arm Spring Screw P.C.Board		51 52 53 54 55	CNV1634 CBF1002 CBH1133	Lever Unit Bracket Roller Washer Spring
	11 12 13 14 15	CBA1075 CXA2148	Bracket Unit Chassis Unit Cushion Screw Damper Unit		56 57 58 59 60	CNV1632 CBH1181 CNV1628	Bracket Unit Bearing Spring Arm Unit Gear
	16 17 18 19 20	CBH1139 CNV1633 YE20FUC CNV1631 CBF-166	Spring Holder Washer Cam Washer		61 62 63 64 65	CNV1627 CNV1629 CXA2456 CNY-265	Gear Gear Gear Unit Bracket Unit Cushion
	21 22 23 24 25	CNV1636 CBH1135	Bracket Roller Guide Arm Unit Spring	•	66 67 68 69 70	**************************************	Carriage Unit Spring Arm Unit Spacer Ball
**	26 27 28 29 30	CNV1884 CBA1070 CSN1009 CNV1644 HBA-175	Bearing Screw Switch(Disc Set) Holder Screw		71 72 73 74 75	CNV1643 CNC1738 CNC1739	Clamper Guide Chassis Unit Holder Holder
**	31 32 33 34 35	CXA2129 CKS-719 CKS-721 SLH-34VC3F	Motor Unit(Loading) Bracket Connector Connector LED		76 77 78 79 80	PMS20P030FMC HBA-163 CBH1138	Screw Screw Spring Bracket Unit Holder Unit
	36 37 38 39 40	CNV1639 CNP1711 YE15FUC	Holder Connector P.C.Board Washer Arm Unit	**	81 82 83 84 85	CBA-098 CXA2133 CBH1104 CNV1844	Screw Bracket Motor Unit(Carriage) Spring Spacer
	41 42 43 44 45	CLA1472 CLA1309 CNV1630	Collar Lever Collar Gear Arm Unit	** ** **	87 88 89	CNV1780 CNV1674 CSN-094 CXM1033 CNT1020	Holder Holder Switch(Home) Motor Unit(Spindle) Belt



12. ELECTRICAL PARTS LIST

NOTE:

• For your parts Stock Control, the fast moving items are indicated with the marks ## and #.

: GENERALLY MOVES FASTER THAN *.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Parts whose parts numbers are omitted are subject to being not supplied.

The part numbers shown below indicate chip components.

Chip Resistor

RS1/8S DDDJ, RS1/10S DDDJ Chip Capacitor (except for CQS.....) CKS....., CCS....., CSZS.....

Unit Number:

Unit Name : Main P.C.Board

MISCELLANEOUS RESISTORS

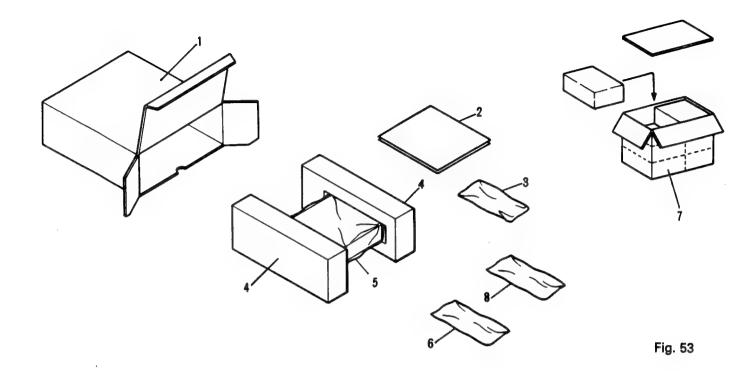
11130	باياناء	HILL	03					KESISI	UKS							
Mark	(==		===	Circu	it Symbol	! & No. ==== Part Name	Part No.	Mark =		Circui	: Symbol	& No.	====	Part N	lame	Part No.
**	łC	351					CXA1081M	R	351							DC1 /20220 (I
**	10	601					CXA1082AQ	R		714						RS1/2P220JL
**	10	651	652				PA3023	R								RS1/10S102J
**	IC	655	657				M5218FP		355 610							RS1/10S223J
**		656					M5233FP	R		358 359	660					R\$1/10\$113J
							***************************************	**	000 001	000 000	003					RS1/10S563J
##		701					CXD1135Q	R								RS1/10S124J
##		702					CXK5816M	R	362 763	3						R\$1/10S564J
**		703					μ PD6355G	R	364 365	618 671						RS1/10S105J
		704					KHA221A	R	366 377	666 769)					R\$1/10S562J
**	IC	751					PD4177	· R	367							RS1/10S104J
**	IC	752					M51955AFP	R	379 722	723 757	758					RS1 /10S472.j
**	IC	753					M51945AFP	R		628 682						R\$1 / 10S203 J
**	10	754					M54546AL	R	382							R\$1 / 10S363.J
**	Q	351	751				2SB822F	R	383							RS1/10S823J
**	Q	601	652	653 7	05	Chip Transistor	UN2211	R	384 630)						RS1/10S273J
**	Q	651	701	752 7	53 756	Chip Transistor	UN2211	R	601 602							RSI / 10S101 J
##	Q	702	706			Chip Transistor	UN2111	R								RS1 / 10S224.i
**	Q	703	704			Chip Transistor	2S01048	R	607 764							RS1 / 10S683.J
**	Q	757	758			,	2S01226M	R	608							RS1 / 105823.1
*	D	651					ERA15-02	R		619 627	759 773	3 774				RSI / 10S104.1
		050						_								
*	-	652					ERA82-004Y	R								RSI / 10S432J
*				655 6	56 657 6 5	SR 659	ERA82-004VH		612							RSI / 10S623 J
*		661	662				HZS2ALL		613							RSI / 10S624J
*		701				hip Diode	MA151WA		616							RSI / 10S183.J
*	D	702	751	752	C	Chip Diode	MA151K	R	620							RSI / 10S332J
*		7 53				hip Diode	MA3200	R								RS / 10S1841
	D				C	hip Diode	MA3056	R	622 670	687 696	697 715	718 7	19 751	752		RS: / 10S103.J
*	D				C	Chip Diode	MA3062	R	623 765							RS / 10S473.1
		651			C	Choke Coil	CTH1035	R	624							RS / 10S393 J
	TH	351			T	hermister	CCX1001	R	629							RS/ 10S153J
	TH	751			т	herwister	CCX-021	R	631							RS / 10S272J
	X	701			C	rystal Resonator	CSS1027	R	634							RS / 10S474.J
	X	751			C	eramic Resonator	CSS-042	R	665 789							RS / 10S8211
**	VR	351			Semi-fixe	d $47k\Omega(B)$, $10k\Omega(B)\times 2$	CCP1005	R	667 684	686 717						RS/ 10S472.
**	VR	352				emi-fixed 47kΩ(B)×4	CCP1006	R	668 679							RS/ 10S392J
**	VR	604			S	emi-fixed 2.2kΩ(B)	HCP-267	R	672							RS/ 10S364.i
**								R	673							RS/ 105473.j
**	V I	001			3	emi-fixed 47kΩ(B)	HCP-275	R	674 716							RS/ 10S332.
								R	676 799							RS/ 10S201.
								R	677							RS/ 10S201J
								•••								100001

Mark		(1)	CUIT SYMBO			Part No.	Mar	* ==		= Circ	MIE 27	AMDO!	No	Part Name	Part No.
	R 678 R 680 R 681				*** *** ****	RS1/10S223J RS1P1R5JL		C	677 6 680						CCSQSL681 J5
	R 683					RS1/10S203J			681						CKSYB393K25
	R 685					RS1/10S101J				10 712	726				CASA6R8M6R3
		002				RS1/10S105J		C	702						CASA220M6R3
	R 690 R 691	703 755				RS1/10S272J			706 7						CCSQCH470J5
	R 694		1			RS1/10S103J			717 7	18					CEA470M6R3L9
	R 701	100				RS1/10S822J			719	~~					CEA101M6R3LS
	R 708	709				RS1/10S100J RS1/10S242J			722 7: 728 7:	23 29 751	754 75	Ω 7 50			CEA330M6R3LS
	D 710					101/1002125		v	120 1	20 101	194 19	6 199			CKSQYB103K50
	R 710 R 712					RS1/10S152J			752						CCSQCH300J50
	R 721	113				RS1/10S392J			753					•	CCSQCH300 J50
		725 726	727 728 7	77 704 700		RS1/10S4R7J			755						CEA221M6R3LL
	R 753		121 120 1	11 104 100		RS1/10S0R0J RS1/10S681J		C	757						CASA6R8M10
f	R 760	701 700	220 221 2	ne											
	R 766		770 771 78	85		RS1/10S222.J RS1/10S681.J			mber:		Supple	u Dail A	C1-1 N-	0.00501~)	
	R 768	775 776				RS1/10S103J	VIII	U 1101		rower	Supply	y omit (Serial No	.00501~)	
f	R 781					RS1/10S303.J	Mari	(===		Circ	uit Svi	mhol & N	la	Part Name	De al. N.
i	R 782					RS1/10S154.								rart mame	Part No.
									951			Regul	ator		L780S05-LR
CAPACI	TURS							Q					Transisto	or	UN2211
Mark .		C:-					*		951 95	2					ERA15-02VH
1461 N =		CIF	Cuit Sympol	₹ NO. ===	== Part Name	Part No.		L				Choke	Coil		CTF-002
	351							R	951						RS1/10S103J
			626 662 66	64 7 13 7 21 7	727	CEA101M6R3LS			051 05						
Ċ	353	613 666	020 002 00	7 113 121 1	24 121	CKSQYB103K50 CKSYB333K25		C	951 95	4					CEA471M16L2
C						CASA330M6R3			953 95	E					CCG-105
	955	667 668	71.4					C S		J					CKSQYF473Z50
C	900	000 100	714												
		001 006	714			CKSQVB103K50		C							CEAUH221M10
С	356		714			CKSYB332K50		C	957						CEAUH221M10 CKSYF334Z25
	356 359 (614	714			CKSYB332K50 CEAR47M50LS			957						
C	356 359 360	614	714			CKSYB332K50 CEAR47M50LS CSZS010M16		C s	957 958						CKSYF334Z25
C	356 359 360 370	614 361 703 704	714			CKSYB332K50 CEAR47M50LS	Unit	C :	957 958 mber :	Power	Supply	Unit (Serial No	00001~00	CKSYF334Z25 CKSYF104Z25
CCC	356 359 360 370 371	614 361 703 704	<i>(</i> 14			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50	Unit Unit	C ! C ! Nui	957 958 mber : me :					.00001~00	CKSYF334Z25 CKSYF104Z25 500)
CCCC	356 359 360 370 371 372	614 361 703 704 615	<i>(</i> 14			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100050	Unit Unit Mark	C ! Nui Nai	957 958 mber : me :	Circu	iit Sym	bol & No	o. ====	Part Name	CKSYF334Z25 CKSYF104Z25 500)
CCCCC	356 359 360 370 371 372 373 601	614 361 703 704 615				CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50	Unit Unit Mark	C ! Nui	957 958 mber :	Circu	iit Sym	bol & Ne	o. ====		CKSYF334Z25 CKSYF104Z25 5000) Part No.
	356 359 360 370 371 372 373 601 602	614 361 703 704 615 327	709			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100050	Unit Unit Mark	C ! Nui Nai	957 958 mber : me :	Circu	iit Sym	bol & Ne	o. ==== onverter	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No.
CCCCC	356 359 360 370 371 372 373 601 602	614 361 703 704 615	709			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100050 CCSQCH220J50 CKSQYB222K50	Unit Unit Mark	C ! Nui Nai IC !	957 958 mber : me :	Circu	iit Sym	bol & Ne	o. ====	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211
	356 359 360 370 371 6 372 373 601 602 603 6	614 361 703 704 615 327 353 708 367 612	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CCSQCH220J50 CCSQCH220J50 CEA100M25LS CEA100M6R3LS	Unit Unit Mark	C ! Nui Nai IC ! Q ! D !	957 958 mber : me : 951 951 951 951	Circu	iit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH
000000000000000000000000000000000000000	356 359 360 370 371 8 372 373 601 602 603 603 605 605 605	614 361 703 704 615 327 353 708 367 612	709			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100050 CCSQCH220J50 CKSQYB222K50 CEA100M6R3LS CEA100M6R3LS CKSYB473K25	Unit Unit Mark	C ! Nui Nai IC !	957 958 mber : me : 951 951 951 951	Circu	iit Sym	bol & Ne	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002
	356 359 360 370 371 6 372 373 601 602 603 6	614 361 703 704 615 327 353 708 367 612	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CCSQCH220J50 CCSQCH220J50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M16LS	Unit Unit Mark	C S Number Name Name Name Name Name Name Name Name	957 958 mber : me : 951 951 951 951 951	Circu	iit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH
	356 359 360 370 371 372 373 601 602 603 603 605 606	614 361 703 704 815 327 353 708 3607 612 320 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CCSQCH220J50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL	Unit Unit Mark	C ! Nuii Naii IC ! Q ! E ! R ! C !	957 958 mber : me : 951 951 951 951 951 951	Circu	iit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002
	356 359 360 370 371 372 373 601 602 603 605 606 606	614 361 703 704 615 627 653 708 607 612 620 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL CKSQYB472K50	Unit Unit Mark	C ! Nui Nai Nai Nai R !	957 958 mber : me : 951 951 951 951 951 951 951	Circu	iit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105
	356 359 (359 (370) 370) 371 (8 372 373 (6 601) 602 (6 603 (6 606) 608 (609) 610 (6	614 361 703 704 615 627 653 708 607 612 620 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M6R3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50	Unit Unit Mark	C ! Nui Nai Nai Nai C ! S C ! S C S C S C S C S C S C S C S	957 958 mber : me : 951 951 951 951 951 951 953 953 953 954	Circu	iit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50
	356 359 360 370 371 8 372 373 601 602 603 606 606 608 609 7 610 616	614 361 703 704 615 627 653 708 607 612 620 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL CKSQYB472K50	Unit Unit Mark	C ! Nui Nai Nai Nai R !	957 958 mber : me : 951 951 951 951 951 951 953 953 953 954	Circu	iit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105
	356 359 360 370 371 8 372 373 601 602 603 606 606 608 609 7 610 616 617	614 361 703 704 615 627 653 708 607 612 620 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M6R3LS CKSYB473K25 CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CCSQCH221J50 CCFA220M6R3LS CEA220M6R3LS CEA220M6R3LS CEA220M6R3LS CEA220M6R3LS CEA4R7M16LS	Unit Unit Mark ** **	C S Num	957 958 mber : me : 951 951 951 951 951 951 951 953 953 953 958 958 958 958 958 958 958 958	Circu	rit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50
	356 359 360 370 371 8 372 373 601 602 603 605 606 608 609 7 610 616 617 618	614 361 703 704 615 627 653 708 607 612 620 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CCSQCH221J50 CCA220M6R3LS	Unit Unit Mark ** **	C S Num	957 958 mber : me : 951 951 951 951 951 951 951 953 953 953 958 958 958 958 958 958 958 958	Circu	rit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50
	356 359 360 370 371 372 373 601 602 603 606 608 609 7 610 616 617 618 621	614 361 703 704 615 627 653 708 607 612 620 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100050 CCSQCH220J50 CKSQYB222K50 CEA100M6R3LS CEA100M6R3LS CEA220M16LS CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CKSQYB682K50 CEA4R7M16LS CKSQYB682K50 CEA4R7M16NPLL	Unit Unit Mark ** ** ** Unit	C S Number of State o	957 958 mber : me : 951 951 951 951 951 951 953 953 954 955 956 mber : me :	Circu	rit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50
	356 359 360 370 371 601 602 603 606 608 609 7 610 616 617 618 621 623	614 361 703 704 615 627 653 708 607 612 620 622	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CEA4R7M16LS CKSQYB683LS CKSQYB682K50	Unit Unit Mark ** ** ** Unit	C S Number of State o	957 958 mber : me : 951 951 951 951 951 951 953 953 954 955 956 mber : me :	Circu	rit Sym	D/D Co Chip 1	o. ==== onverter Fransisto	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50
	356 359 360 370 371 372 373 601 602 603 605 606 608 609 7610 616 617 618 621 623	614 361 703 704 615 627 653 708 607 612 620 622 756 619	709 716			CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB22ZK50 CEA100M6R3LS CEA100M6R3LS CEA220M16LS CEA220M6R3NPL CKSQYB473K25 CEA220M6R3NPL CKSQYB473K25 CEA220M6R3NPL CKSQYB473K25 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CKSQYB682K50 CEA4R7M16LS CKSQYB682K50 CCSQCH391J50 CCSQCH391J50	Unit Unit ### ### ### ### ### Unit HISCE	C S Num Nam Num Nam Num Nam	957 958 mber : me :	Circu Displa	y Unit	D/D Co Chip 1 Choke	o. ==== ponverter fransisto Coil	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No.
	356 359 360 370 371 372 373 601 602 603 605 606 608 609 7610 616 617 618 621 623	614 361 703 704 615 627 653 708 607 612 620 622 756 619	709 716 628 629	'Ω μ Ε /1 ε Ψ		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CEA220M6R3LS CEA4R7M16LS CKSQYB682K50 CEA4R7M16NPLL CKSQYB877K50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CKSYF224Z25	Unit Unit ####################################	C S Num Nam Num Nam Num Nam Num Num Num Num Num Num Num Num Num Nu	957 958 mber : me :	Circu Displa	y Unit	D/D Co Chip 1 Choke	o. ==== ponverter fransisto Coil	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No.
	356 359 360 370 371 372 373 601 602 603 605 606 608 609 7610 616 617 618 621 623	614 361 703 704 615 627 653 708 607 612 620 622 626 619	709 716 628 629	'OμF/16V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M25LS CEA100MBR3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CKSQYB682K50 CEA4R7M16NPLL CKSQYB272K50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CKSYF224Z25 CCH-114	Unit Unit ####################################	C S Num Nam IC S S C S C S S C	957 958 mber : me : 951 951 951 951 951 953 954 953 956 siber : iEOUS	Circu	y Unit	D/D Co Chip 1 Choke	o. ==== ponverter Fransisto Coil	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P
	356 359 360 370 371 372 373 601 602 603 606 608 608 609 7610 616 617 618 621 623	614 361 703 704 615 627 653 708 607 612 620 622 626 619	709 716 628 629	'OμF/16V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH220J50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CKSQYB6882K50 CEA4R7M16NPLL CKSQYB272K50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CKSYF224Z25 CCH-114 CCSQCH221J50	Unit Unit ####################################	C !! Nuii Naii IC !!	957 958 mber : me : 951 951 951 951 951 951 951 951	Circu	y Unit	D/D Co Chip 1 Choke	converter Coil Chip 1	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P UN2211
	356 359 360 370 371 372 373 601 602 603 605 606 608 609 7610 616 617 618 621 623 624 651 652 654 652	614 361 703 704 615 627 653 708 607 612 620 622 626 619	709 716 628 629	'OμF/16V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M25LS CEA100MBR3LS CKSYB473K25 CEA220M16LS CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CKSQYB682K50 CEA4R7M16NPLL CKSQYB272K50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CKSYF224Z25 CCH-114	Unit Unit ####################################	C !! Nuii Naii IC !!	957 958 mber : 951 951 951 951 951 951 951 951	Circu	y Unit	D/D Co Chip 1 Choke	chip T	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P UN2211 UN2111
	356 359 360 370 371 601 602 603 605 606 608 609 7 610 616 617 618 621 623 624 651 652 654 665 665 665 665 665 665 665	614 361 703 704 615 327 353 708 607 612 320 622 320 622 756 319	709 716 628 629	'OμF/16V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M25LS CEA100M6R3LS CEA220M16LS CEA220M16LS CEA220M6R3LS CEA220M6R3LS CEA4R7M16LS CKSQYB822K50 CEA4R7M16LS CKSQYB82T2K50 CCSQCH391J50 CCSQCH391J50 CKSYF224Z25 CCH-114 CCSQCH221J50 CEA100M16LS	Unit Unit ####################################	C !! Nuii Naii IC !! IC ! IC	957 958 mber : me : 951 951 951 951 951 951 951 951 951 952 953 955 iber : icous 101 901 902	Circu	y Unit	D/D Co Chip 1 Choke	chip T	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P UN2211 UN2111 2S01760F5
	356 359 360 370 371 372 373 601 602 603 606 608 609 7 610 616 617 618 621 623 624 651 652 654 656 665 665 665 665 665 665 665 665	614 361 703 704 615 327 353 708 607 612 320 622 320 622 756 319	709 716 628 629	'0 μ F/1 6 V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH220J50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CKSQYB6882K50 CEA4R7M16NPLL CKSQYB272K50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CKSYF224Z25 CCH-114 CCSQCH221J50	Unit Unit ####################################	C !! Nuii Naii IC !!	957 958 mber : me : 951 951 951 951 951 951 951 951 951 952 953 955 iber : icous 101 901 902	Circu	y Unit	D/D Co Chip 1 Choke	chip T	Part Name	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P UN2211 UN2111
	356 359 360 370 371 372 373 601 602 603 605 606 608 609 7610 616 617 618 621 623 624 651 652 654 656 665 665 6671 671 671 671	614 361 703 704 615 627 653 708 607 612 620 622 626 619	709 716 628 629	'0 μ F/1 6 V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100D50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CEA220M16LS CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CFA220M6R3LS CEA4R7M16LS CKSQYB82ZK50 CEA4R7M16NPLL CKSQYB87ZK50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CCSQCH221J50 CCSQCH391J50 CCSQCH391J50 CCSQCH391J50 CCSQCH221J50 CEA100M16LS CEA010M50NPLL	Unit Unit ####################################	C !! Num Nam IC 9 9 Q 9 Q 9 D 9 D 9 D 9	957 958 mber: 961 951 951 951 951 951 951 951 951 951 95	Displa	y Unit	D/D Co Chip 1 Choke	chip T	Part Name r Part Name rransistor ransistor	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P UN2211 UN2111 2S01760F5 LN81RC5V
	356 359 360 370 371 372 373 601 602 603 605 606 608 609 7610 616 617 618 621 623 624 651 652 654 656 665 661 665 661 665 667 674 766 674 766	614 361 703 704 615 627 653 708 607 612 620 622 756 619	709 716 628 629	'0 μ F/1 6 V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH220J50 CCSQCH220J50 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CEA220M6R3LS CEA4R7M16LS CKSQYB682K50 CEA4R7M16NPLL CKSQYB672K50 CCSQCH221J50 CEA100M16LS CEA010M50NPLL CKSYB473K25 CSZSR68M20 CASA100M6R3	Unit Unit ####################################	C !! Num Nam IC 9 9 Q 9 Q 9 D 9 D 9 D 9 D 9 D 9 D	957 958 mber: me : 951 951 951 951 951 951 951 951 951 951	Displa	y Unit	D/D Co Chip 1 Choke	chip T	Part Name r Part Name rransistor ransistor	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P UN2211 UN2111 2S01760F5
	356 359 360 370 371 372 373 601 602 603 605 606 608 609 7610 616 617 618 621 623 624 651 652 654 656 665 665 6671 671 671 671	614 361 703 704 615 627 653 708 607 612 620 622 756 619	709 716 628 629	'O μ F/1 6 V		CKSYB332K50 CEAR47M50LS CSZS010M16 CCSQCH220J50 CKSQYB102K50 CCSQCH100050 CCSQCH220J50 CKSQYB222K50 CEA100M25LS CEA100M6R3LS CKSYB473K25 CEA220M6R3NPL CKSQYB472K50 CCSQCH221J50 CEA220M6R3LS CEA4R7M16LS CKSQYB622K50 CEA4R7M16NPLL CKSQYB6272K50 CCSQCH391J50 CCSQCH3P1	Unit Unit ####################################	C !! Nuii Naii IC !! IC ! IC	957 958 mber: me : 951 951 951 951 951 951 951 951 951 951	Displa	y Unit	D/D Co Chip 1 Choke	chip T	Part Name Part Name Fransistor Fransistor Fransistor	CKSYF334Z25 CKSYF104Z25 500) Part No. KHA1001B UN2211 ERA15-02VH CTF-002 RS1/10S103J CEA471M16L2 CCG-105 CKSQYF473Z50 CEAUH221M10 Part No. LC7582P UN2211 UN2111 2S01760F5 LN81RC5V MA3091
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		No. === Part Name	
## S 904 ## IL 901	••• ••• •••	Switch(PLAY) Lamp LCD	
RES1STORS			
Mark ======	Circuit Symbol 8	No. ==== Part Name	Part No.
R 902 R 903 904 R 909 R 910 R 911			RS1/10S104J RS1/10S102J RS1/10S681J RS1/10S222J RS1/10S821J
R 912 919 R 913 914 R 921	922 915 916 917 918		RS1/10S201J RS1/10S151J RS1/10S103J
CAPACITORS			
	*** *** ***	No. ==== Part Name	
Mark =======	Carriage P.C.Boan	No. ==== Part Name	Part No.
## M 831 ## M 832 ## S 831		Motor Unit(Spindle) Motor Unit(Carriage) Switch(Home)	CXM1033 CXA2133
Unit Number: Unit Name : h	Mechanism Р.С.Воа	ard	
		No. ==== Part Name	
## Q 831 # D 831 ## M 833 ## S 832		Photo-transistor LED(DISC Detect) Motor Unit(Loading) Switch(DISC Set)	PH102-F SLH-34VC3F
Miscellaneous Pa	ırts List		
Mark =======	Circuit Symbol &	No. ==== Part Name	Part No.
		PU Unit	CGY1007 (CGY1008)



13. PACKING METHOD



• Parts List

Mark No. 1 2	Part No. CHG1534 CHG1533 CRD1238 CRD1237 CRD1255	Description Mark Carton (UC) Carton (EW) Owner's Manual (UC) Owner's Manual (EW) Installation Manual (EW)	No. 3-6-1 3-6-2 3-6-3 3-6-4 3-6-5	Part No. BMZ30P050FMC BMZ40P080FMC BMZ50P080FMC IIMF40P080FUC CBA-102	Description Screw(×2)(UC) Screw(×4)(UC) Screw(×4)(UC) Screw(×1)(UC) Screw(×1)
3 1	CEA1401 CEA1421 CBII-865	Caution Card Card Accessory Assy(UC) Accessory Assy(EW) Spring	3-6-6 3-6-7 3-7 3-7-1 3-7-2	CBA1002 NF50FMC CBA-102 HMF40P080FUC	Screw(×1) Nut(×2) Screw Assy(EW) Screw(×4)(EW) Screw(×1)(EW)
3 2 3-3 3-4 3-5 3-6	CNC1631 CNF-111 CNV1917	Handle Strap Spacer Unit Bush Screw Assy	3-7-3 3-7-4 4 5 6	HMF40P080FZK NF50FMC CHP1186 CEG-162 CNS1403 CHL1534 CNB1159	Screw(×4) (EW) Nut(×4) (EW) Styrofoam Polyethylene Bag Panel Contain Box(UC) Mounting Bracket(EW)





SERVICE GUIDE ORDER NO. CRT 1161

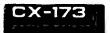
CD MECHANISM UNIT

- This service manual is a description of the CD mechanism found in the model numbers listed in the table below.
- When performing repairs use this manual together with the specific manual for the model under repair.

Model	Service Manual
DEH-66/UC	CRT1166
DEH-66SDK/WG	
DEH-66/EW	
DEH-66/EI	

PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium

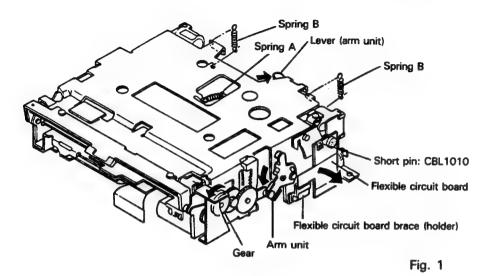
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911



1. DISASSEMBLY

• Disassembly of the Carriage Unit

Note: There may be times when the names of parts used in this manual are not the same as those used in the lists accompanying the Exploded View. If a different name is used here, the part name given in the Exploded View is also provided in parentheses ().



- Put the mechanism unit into a loading complete state. (Move the lever back and rotate the gear while pressing down lightly on the arm unit. Rotate the gear until the three carriage unit shafts are free and the unit is supported by the four damper units.
- 2. Remove Spring A and two Springs B.
- Remove the flexible circuit board from the flexible circuit board brace.

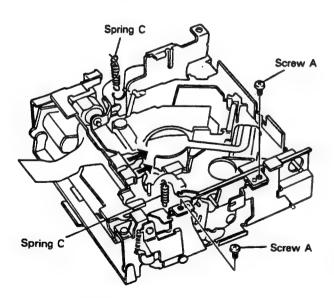
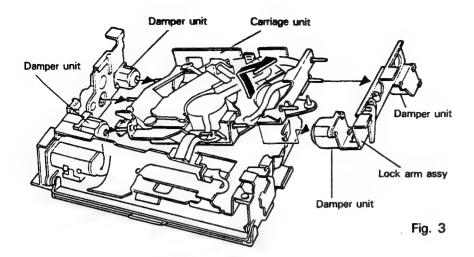


Fig. 2

- 4. Turn the mechanism unit upside down.
- 5. Remove the two Springs C.
- Remove the two flexible circuit boards from their connectors.
- 7. Remove the two Screws A.





- 8. Lift the lock arm assembly and then pull out the carriage unit.
- Remove the carriage unit from the lock arm assembly.
 Note: The damper units are lined with a thin rubber film. Be careful not to damage this when disassembling.

• Disassembly of the Carriage Motor Unit

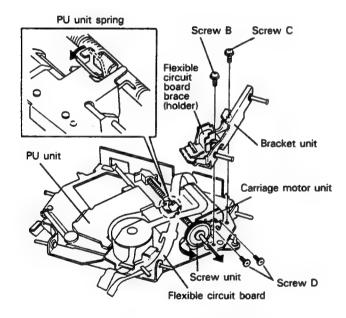


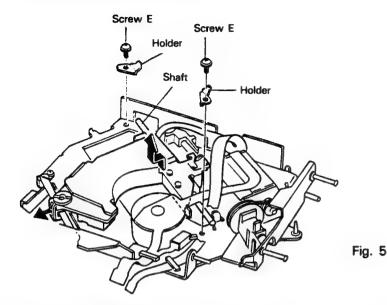
Fig. 4

- After removing the Screw B and Screw C, remove the bracket unit. At this time remove the flexible circuit board from the flexible circuit board brace.
- 2. Remove the belt.
- Cock the PU unit spring as shown in Fig. 4 and then move the PU unit to its outermost position.
 (Cocking the spring disengages the screw unit so that the PU unit can be moved by hand from above.)
- 4. Pull the screw unit out of the assembly.
- 5. Remove the two Screws D and then the carriage motor unit.

Note: When reinstalling the carriage motor unit, tighten Screw D and seal it.



• Disassembly of the PU Unit



- Cock the PU unit spring as shown in Fig. 4.
 Move the PU unit to the center of the shaft for easy removal.
- 2. Remove the two Screws E and then the holders.
- 3. Remove the PU unit, lifting it from the shaft side where the holders have been removed and being careful not to catch the shaft on the opposite side.
- 4. Pull the shaft out of the PU unit.

Disassembly of the Spindle Motor Unit

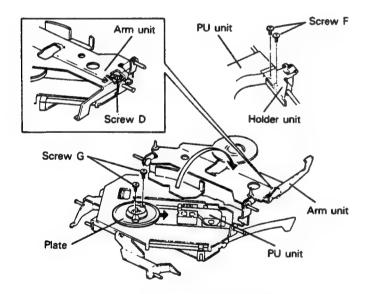


Fig. 6

- 1. Remove the two Screws F and then remove the holder unit from the PU unit.
- 2. Cock the PU unit spring as shown in Fig. 4 and move the PU unit to its outermost position.
- 3. Turn the whole carriage unit right side up.
- 4. Remove Screw D and turn the arm unit upside down.
- 5. Turn the spindle motor plate so that the holes on the plate are at the position of the screws underneath.
- 6. Remove the two Screws G.
 - Note: When reinstalling the spindle motor unit, tighten the Screws G and seal them.
- 7. Slide the spindle motor unit onto its side and remove it



Disassembly of the Loading Motor Unit

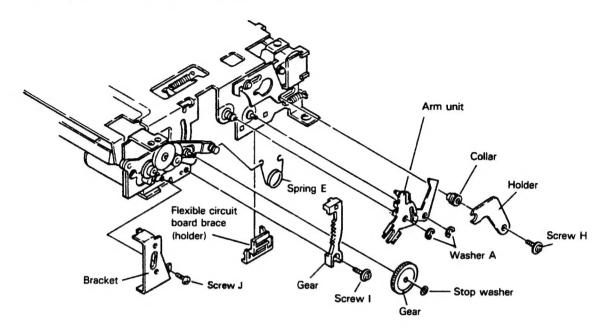
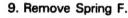


Fig. 7

- Remove the carriage unit.
 (Refer to the previous section entitled, "Disassembly of the Carriage Unit.")
- 2. Remove the flexible circuit board brace.
- 3. Remove Screw H and then the holder.

 Note: When Screw H is removed, the collar will also come free. Be sure not to lose it.
- 4. Remove the Screw E.
- 5. Remove the two Washers A and then the arm unit.
- 6. Remove the stop washer and then the gear.
- 7. Remove Screw I and then the gear.
- 8. Remove Screw J and then the bracket.



- 10. Remove washer B.
- 11. Remove the two Screws K and then pull out the bracket unit.

Note: The bearing at the tip of the roller will also come loose. Be careful not to lose it.

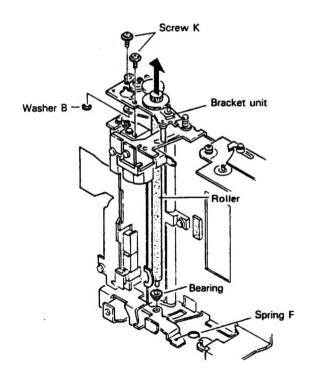
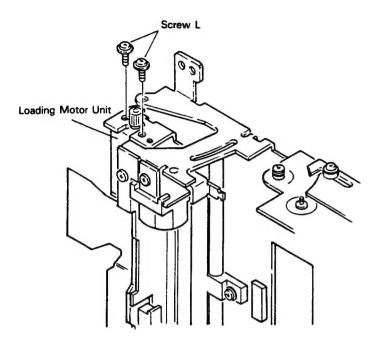


Fig. 8



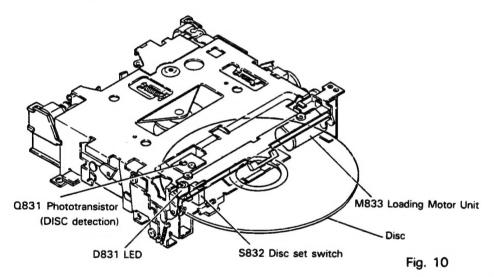


12. Remove the two Screws L and then the loading motor unit.

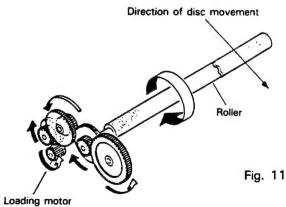
Fig. 9

2. MECHANISM DESCRIPTION

Loading Operation



- When a disc is inserted into the unit, it enters between the LED and the phototransistor with the result that the light from the LED to the phototransistor is blocked.
- When the phototransistor detects a disc presence in the unit, the loading motor begins to rotate and loading begins.
- 3. When the loading motor rotates, the roller is turned and the disc is moved into the unit. (Fig. 11)





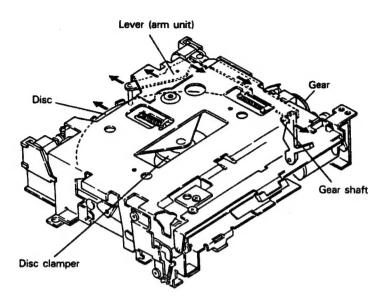


Fig. 12

- 4. When the disc pushes on the lever, the gear shaft lock is released. The gear meshes with another internal toothed gear and is lowered. (See Figs. 12, 13)
- The action of the gear shaft moving down lowers the disc clamp and the disc is held in place.
- As the gear is lowered when it meshes with the internal toothed gear, the gear unit also is lowered and the disc set switch pressed.
- At the same time, the disc door is lowered and the disc insert door is blocked to prevent the introduction of another disc.

The three shafts of the carriage unit are in a free mode and the carriage unit is in an anti-vibration mode supported by the four damper units. (Fig. 14) When the disc set switch is turned on, loading motor rotation stops and the loading operation is complete.

Free the carriage unit by disengaging

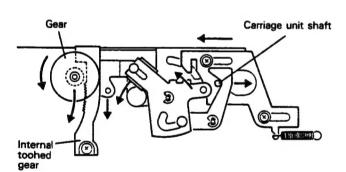


Fig. 13

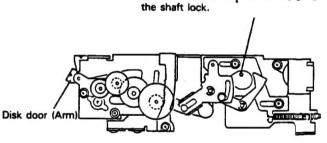
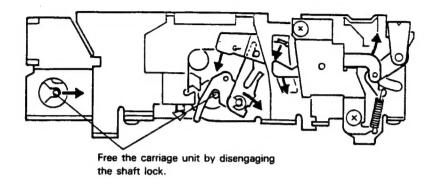


Fig. 14



(view of reverse side)



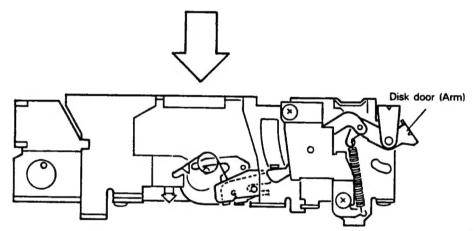


Fig. 15